

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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The South Sings a Song of Optimism

Through this issue of the MANUFACTURERS RECORD there runs one unceasing strain of optimism.

From every part of the South and from nearly every line of industry come reports of advancing prices, increasing activity and a broadening of the market for the products alike of farm and factory.

Here and there are signs that business expansion is treading hard on the heels of railroad facilities, and the time may not be far distant when the cry of car shortage will be heard through the land.

Advancing prices for cotton will give to the growers of this year's crop, and those who have brought over some millions of bales from last year's, higher prices than were deemed possible a few months ago, and the aggregate of this year's crop and the amount brought over will give to the South as large an amount of cotton to be sold as in a banner year of production.

No longer is a pessimist respectable. No longer is anyone willing to listen to his croaking. No longer is there room for him, for the optimist possesses the land and his optimism is based not simply on faith, but on actual achievements, on the things that are being done, on the mighty change that has already taken place, as well as on the other changes that are everywhere in sight.

The South is beginning to sing a song of optimism. Let all unite in the refrain:

BALTIMORE, SEPTEMBER 30, 1915



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SPARTANBURG, S. C.

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Whitehall Building NEW YORK, U. S. A.

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Producers of the Highest Grade Brimstone
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**Will Increase Efficiency
of Your Steam Plant**

The value of superheated steam for increasing efficiency and economy of steam engines, turbines, pumps, etc., is well known, and the ability of Foster Superheater has been proved beyond doubt.

Our Superheater will effect a considerable saving in even the most economical plant, and we will gladly explain to power plant owners why they should use it will tell them all about its many advantages and uses.

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MANUFACTURERS RECORD

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RICHARD H. EDMONDS, Editor and General Manager

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BANKERS SHOULD GIVE MORE ATTENTION TO MANUFACTURERS' REQUIREMENTS.

THE manufacturers of the South are very seriously handicapped in many cases by the fact that the banking interests of this section do not give to industrial concerns the same facilities that they give to mercantile business or to other lines of operations with which most Southern bankers are more familiar than with manufacturing.

Good banking demands a full understanding of all business conditions and an intelligent study of industrial as well as of mercantile operations. A manufacturing industry is of far more value to a community in the creation of employment and of wealth than the average mercantile institution. One creates things; the other is merely a handler or a manipulator of things. One takes the raw material and develops or creates actual wealth; the other makes the profit of a middleman in passing merchandise from the producer to the consumer.

To a very large extent the bankers of the South have so long been identified with the agricultural and mercantile interests of their communities that often they are not in as close touch with manufacturers as they should be, nor do they understand the basis of credit to manufacturers as fully as they do to merchants. The banker can look to the merchant for an inventory of his stock on hand or his bills receivable. The manufacturer, on the other hand, does not in the same way carry stock on hand, but he has contracts in the course of manufacture. He buys his raw material, he puts it into the shop, and he turns out the finished product. As it goes through this stage a great deal of money is essential to pay for labor and material, and the manufacturer who cannot command ample banking facilities at a moderate rate of interest is seriously handicapped, and especially so in comparison with Eastern and Western manufacturers, where money at a low rate of interest is available and where bankers center their thought and activities on co-operation with the manufacturers. It is to this vigorous co-operative work in providing money at a low rate of interest by the bankers of these sections that the wonderful industrial development of New England and the West is largely due. The South cannot reach its full measure of industrial growth until all its bankers come into as intimate relation with the manufacturers as the bankers of the West and East are in touch with the manufacturing interests of those sections.

It is feasible for Southern bankers to secure from their Eastern correspondents or from the Federal Reserve Board sufficient money to enable them to meet the needs of financially sound manufacturing interests. When they fail to do so, they are failing to do their part in the development of the South, and they are, to the extent of their influence as bankers, retarding the progress of the South.

AN OPEN LETTER TO THE UNITED STATES STEEL CORPORATION, THE BETHLEHEM STEEL CO., MEMBERS OF AMERICAN IRON AND STEEL INSTITUTE J. P. MORGAN & CO., AND OTHERS.

THE broadest and safest development of this country can only be secured by the broadest development of the nation's greatest material asset—the South.

So long as this section is not keeping full step with the material development of other sections there can be no well-rounded national development or the fullness of national life.

The South, the most Anglo-Saxon region of America, if not of the world, considering the small intermixture of foreign blood with the white blood of the South, comprises in area a very large percentage of the entire country.

It has considerably more than one-half of the coast line of the United States.

It produces the entire cotton crop of the country.

It is already producing more than one-fourth of the nation's grain crop.

It has about one-half of the standing timber of the United States.

It produces three-fourths of the sulphur of the world.

It has about three-fourths of the coking-coal supply of the country.

It is the center of oil and gas activity.

It has almost limitless water-powers.

And yet, with all of these and many other natural advantages, greater than those given to any other equal area on earth, it has not had the wonderful development of business and the marvelous accumulation of wealth seen in other sections.

It is needless to repeat the reasons for this. They are known to all who are familiar with the devastating wreck and ruin of the war.

It is, however, essential that those whose capital and energy made possible the development of the mighty empire of the West, and all who look broadly to the highest development of the nation, should regard with the utmost friendly interest the situation in the South and co-operate to the largest possible extent in the development of that section.

The South's vast resources should be utilized not only for the profit of the investors, but for the development of the nation. Its intimate relation, from the viewpoint of its coast line and its natural resources to the welfare of the nation, affording a foundation for the creation of vast wealth to the whole country, should make the National Government and the financiers and the iron and steel men of the country recognize the supreme importance from every point of view of the fullest development of the South.

At the present time the iron and steel and kindred interests of the East and West are crowded to the utmost limit of their capacity, this condition being largely brought about by enormous war orders.

It would be a very narrow view to take if the great leaders of the country should satisfy them-

selves to secure out of this business the largest profit possible, without regard to its influence upon the future welfare of the nation.

It would be a very narrow and selfish point of view for them to feel that they could afford to continue to concentrate their efforts upon the largest production of iron and steel in existing plants or in plants that are now being built in the older sections.

The safety of the nation in the future may some day depend upon the broad development at present of the metallurgical interests of the South.

This section is practically standing idle in its iron and steel interests as compared with the tremendous sweep of progress which is being made by other sections.

It is incumbent upon the United States Steel Corporation, which holds what may be called fiduciary relations to the entire country, to bend its efforts to the broadest development of the iron and steel business of the South. It is already in that section, but in it on a much smaller scale than the situation demands.

It is incumbent upon the Bethlehem Steel Co., with all its widening activities from the Atlantic to the Pacific, to give attention to the potentialities of the South and to the building in that section of steel or machine plants, or to the co-operation with existing plants in order that their facilities may be enlarged and a share of this present business be secured.

It is incumbent upon Messrs. J. P. Morgan & Co., who represent hundreds of millions that have been invested in Southern railroads and kindred interests, and who are now the representatives of the Allies in placing enormous war orders in this country, to put as much of this business in the South as possible.

It is incumbent upon the railroads and upon all other interests in the South to co-operate in this campaign, for upon what may be done within the next few months in stimulating the iron and steel and machinery business of the South the future of this industry for the next decade and possibly for the next quarter of a century will depend.

These great leaders, to whom this open letter is addressed, and others upon whom the responsibility rests with equal force, should appreciate the fact that instead of waiting for the South to get ready for this business and seek it, they should aggressively co-operate with the South in seeking it and in handling it.

At present nearly all of the war munition business of the United States is concentrated in a narrow strip along the Atlantic Coast from Connecticut to Pennsylvania. In this narrow strip, two hundred miles or thereabouts in length and much less in width, is centered practically the entire munition-making capacity of the nation.

It is conceivable that under some conditions this

section might be captured by an enemy and the rest of the nation would be utterly helpless because it would have no means of producing war supplies.

It is conceivable that with the very large number of foreigners in the East and West, whose hostility to the making and shipment of war supplies, whose bitter attacks upon the President and whose vicious and vindictive efforts to prevent the loaning of money to the Allies, unite to make almost a civil war condition, without the actual shedding of blood, there might be brought about a tie-up of a large proportion of these Eastern works, and neither this country nor the Allies would be in a position to help themselves.

These are not fanciful sketches nor the vaporings of imagination; they are but what can be heard in every gathering of intelligent Americans—bankers, iron and steel men and others—who have been carefully studying the situation. These men give voice to these sentiments freely in private conversation, but they are not taking any active steps to overcome the matter. The MANUFACTURERS RECORD calls upon them, in the interest of the nation, to move, and move vigorously, for the largest development of the metallurgical interests of the South.

EDITOR MANUFACTURERS RECORD.

HOW MANY PARENTS ARE PROPERLY TRAINING THEIR SONS?

MR. R. A. TERRELL of Birmingham, in a letter to the MANUFACTURERS RECORD, writes as follows:

This week I entered my son as a student at the University of Virginia. I enclose herewith an order for subscription for his use. I think it not unwise to state that I asked him to study its columns as diligently as any of his textbooks. I feel that the information you furnish is invaluable to a business man, therefore equally as essential to one who is preparing for a life of activity and usefulness.

This subscription and the accompanying statements connected therewith from Mr. Terrell prompt the question:

How many parents are failing to furnish the right kind of reading to their sons and daughters, and then wonder why they go wrong or make a failure of life?

Many homes, and even some Young Men's Christian Association libraries, fill their reading tables with comic weeklies or trashy magazines which by the picture and the printed word make light of sacred things, make a joke of scandals, divorce and immorality, uphold the liquor traffic with all its power for evil in politics, pose prohibition workers and ministers as sanctimonious hypocrites, and thus give encouragement to the young to poison their minds, ruin their bodies and lose their souls by feeding on such carrion food.

With all the splendid literature of the world available, with papers and magazine that are clean and ennobling, with business publications that treat of all the broad problems affecting the business welfare of the nations, with home-making magazines that never pander to evil, but are always on the side of right—magazines and papers in whose columns no unclean story is ever found—and with splendid religious and semi-religious literary publications everywhere, why should that which is tainted—yes, rotten—be provided for the reading of the young?

The rotten story, the suggestive joke, the pictured sanctimonious hypocrite as the minister or the worker against the drink evil are far more poisonous to mind and soul than the tainted meat which poisons the body. One at the worst can only kill the body; the other kills the mind and soul or leaves a scar which no power in the universe removes.

The MANUFACTURERS RECORD rejoices that among its readers are many young people, and that it has some subscribers who tell of its good influence upon the lives of their sons. It would gladly have more, but it is discussing this question not from personal motives, but from the broad platform of encouraging the reading of the many good publications of the day rather than that of the vile or trashy.

FORWARD, MARCH—THE CRY OF THE SOUTH.

NOT since the panic of October, 1907, has the situation looked so promising for the South as at present.

During the last eight years we have had no period of broad general prosperity in this country. We have had brief spurts in some particular lines of industry, and we had five or six years of exceptionally good conditions in the production and price of cotton, but in all this period there has been a lack of enthusiasm and snap. Railroads were feeling the full effect of the hampering restriction against capital and corporations, and, therefore, could do but little improvement or extension work. New railroads were scarcely to be thought of, except where here and there some daring attempt was made to build a small line.

In all that long period the iron and steel industry of the South was more or less depressed, and for a great part of the time was very seriously depressed and operated at little or no profit. The dullness in railroad construction work brought about great dullness and depression in lumber, one of the South's largest industries. While cotton was high during a considerable part of that time, cotton goods were for most of the period low in price, and cotton mills were run without much profit, except in rare cases.

One of the most depressing and at the same time most noticeable features in connection with a broad study of the whole South was the lack of that optimism and enthusiasm and determination to achieve things which had been so pronounced for many years prior to the panic of 1907.

Now the whole scene has been shifted. The stage apparently has been set for a new order of things. The mighty panorama of broad Southern development which has been moving so slowly for the last eight years begins once more to unfold with increasing rapidity.

The spirit of optimism is spreading. Quickened by the very situation which the South faced last fall, determined that this section should not be downed by one year of adverse conditions in trade, nor be made to stand before the world as impoverished, unable to meet a temporary difficulty, the people of the South are arousing themselves and preparing to march forward to a victory over every unfavorable circumstance.

No one can pick up a Southern paper anywhere from Maryland out to Texas and Oklahoma without catching the note of optimism which is being struck by everybody in every direction.

The iron and steel industry is crowded as it has not been since the early part of 1907. Some furnaces out of blast for ten or twelve years are being made ready as rapidly as possible to blow in again. Advancing prices in iron are giving a broader margin of profit to the ironmakers than they have known for years.

Cotton mills are fully employed, and there are more signs of activity in the enlargement of existing mills and the construction of new mills than for eight or ten years.

The lumber industry shows a reviving tendency, with advancing prices and a heavy increase in demand.

The phosphate rock industry, almost dormant since last fall, begins again to show signs of life, and, with increasing activity, mines long idle are now being started up.

Vast expenditures are being made for the development of shipping facilities and port improvements along the entire Atlantic and Gulf coasts from Maryland to Texas.

Expenditures for municipal and road improvement work, and especially for the latter, are on a scale never known before in the South.

The South's wonderful grain crop of 1,600,000,000 bushels, or 346,000,000 bushels in excess of last year's yield, has been an illumination to the entire country as to the grain-growing potentialities of the South. Coincident with this is the heavy increase in the production of meats and the greater attention that is being given to brostock raising, hogs and cattle alike commanding more attention in the South now than ever before.

And added to all this improvement is the remark-

able change which has taken place in the cotton market. With a crop of 10,000,000 to 12,000,000 bales now being picked added to the stock of 4,000,000 or 5,000,000 bales brought over from last year, the market is eagerly absorbing the supply at advancing prices—at prices which, indeed, would have been considered very profitable only a few years ago before the South was able to sell one or two crops at higher figures than for many years.

Running over the whole range of agricultural and industrial and railroad activities, the situation is hopeful in the extreme. While some few industries have not yet benefited by the change that is taking place, they are very limited in extent as compared in the aggregate with those that are on an altogether different plane of activity as compared with last year, and many of them as compared with any period since 1907.

The South now only needs faith in itself and the right kind of energy, well directed, to bring about a more far-reaching and widespread and universal prosperity than it has had since the palmy days of 1906 and the early part of 1907, when every railroad was crowded to its utmost capacity and when every industrial enterprise was running to the limit of its available supply of men.

"As a man thinketh in his heart, so is he," is as true of a country as it is of an individual. If the South thinks broad world thoughts, if it thinks in terms of material development based on its limitless resources, if it thinks of its Heaven-given opportunities and feels that it would be a laggard if it did not turn these resources into employment and wealth-creating realities, then there will soon come a broad sweep of prosperity which will lift the South to a higher plane than it has ever known.

Forward, March!

WIPE OUT THE DISGRACE OF DIRTY HOTELS IN SMALL TOWNS.

A TRAVELING man's life is largely made up of hotel life, and sometimes a traveling man when he lands at a hotel in some of the smaller towns almost wishes that he was living in Belgium instead of traveling through this country, and this situation of intolerable hotels in small towns, with insanitary conditions prevailing in so many of them, has resulted in the ill-health and death of many a man compelled by business to put up with unhealthy, unwholesome and inexcusable food and rooms.

These conditions are to be found in very many of the small hotels in country places, although some of the towns in which these things are to be found have 8000 or 10,000 population.

If the traveling men who have to put up with such accommodations would unite in a campaign and demand of State Legislatures the passage of inspection laws where rigid inspection would be required of every hotel, and compel it either to close or to be put in a sanitary condition, and provide at least wholesome food, they would be doing themselves a great service.

We believe that there is no other matter connected with the life of the traveling man more important than this of demanding and securing clean, wholesome hotel accommodations. We believe that it is in the power of the traveling men to bring this about. Certainly they ought to have the co-operation of all intelligent State and municipal authorities in such a campaign, and this campaign ought to be pushed so vigorously that hundreds of the dirty, ill-kept, insanitary small hotels in small towns would be completely destroyed—burned up, if necessary, for many of them are apparently in such a condition that even a reconstruction would scarcely entitle them either to be classed as healthy or safe. Some of the hotels, moreover, are fire traps of the very worst kind, without facilities to prevent fire or to save guests in case of fire.

The traveling men who have to frequent these places owe it to themselves and to the country through which they travel to inaugurate a campaign for decent, clean, wholesome hotels, and decent, clean, well-cooked, substantial food.

What have the traveling men to say on the subject?

What towns in the South need modern hotels?

NATIONAL PREPAREDNESS DEMANDS A REVISION OF THE TARIFF THIS WINTER.

THERE are signs indicating that among many of the leading Democrats of the country there is a growing realization of the fact that had it not been for the war this country would be in the "slough of despond" industrially by reason of the disastrous effect of the tariff on business. That we are not suffering in this way is due wholly to the unforeseen war, which has completely changed the situation and made it impossible for Europe to flood this market with the products which had been put on the free list or on which the tariff had been so greatly reduced that our manufacturing interests, especially throughout the South, would have suffered disastrously.

The sugar industry, as every Democrat must admit, would have been practically destroyed and \$100,000,000 invested therein in Louisiana would have been wiped out and without any profit to the consumers. The iron industry and others would have suffered likewise, even though they might not have been so completely destroyed as sugar. The business men of the South realized this from the very beginning of the tariff agitation, and they viewed with distrust and alarm the fight that was being made to so completely change the tariff as to make certain a severe business depression.

It needed no expert in economics to know this, for every intelligent business man familiar with business conditions knew it. Theorists in Congress or in colleges and universities may proclaim without end the beauty of the free-trade theory, but facts are more substantial than theories, and the business man knew the facts were directly contrary to the theories which prevailed in the legislation that reduced the tariff.

If ever there was a demonstration in the world's history of the wisdom of a protective tariff, it is found in that marvelous development which made Germany so great a nation as it is. With an area very much less than that of Texas, with natural resources not to be compared with those of the South, Germany had grown until its 70,000,000 people had become one of the dominant nations of the earth, increasing in commerce and trade and manufactures with amazing rapidity. In the doing of all this Germany had found it necessary to have a protective tariff, and, at the same time, to encourage its manufacturers to "dump" their surplus products on foreign markets whenever necessary at a lower price than that paid by the domestic consumer. It is a very simple proposition, and one which a schoolboy ought to be able to understand, that a factory running at its full capacity can produce at a very much lower cost than when run at one-half or two-thirds of its capacity. If it can only find a home market for one-half or two-thirds of its possible output, and is not permitted to "dump" its surplus product abroad at a lower price, it must then run at this more limited capacity, and the cost of the goods thus produced would exceed the cost which the consumer would have to pay if the factory were run to its full capacity, even though the home consumer in doing this had to pay a higher price than the price at which the surplus product was sold abroad. In doing this the home consumer was not in the slightest harmed, except, perhaps, in rare cases, but he was benefited by enabling the plant to run to its full capacity.

About eight years ago the MANUFACTURERS RECORD published a statement made by a leading American manufacturer who had spent much time in Germany, pointing out how Emperor William encouraged this system in his country in order to enable German factories to run to their fullest capacity. He was quoted as saying to manufacturers: "Your men must be supported either by this country or by other countries. If you cannot find work for them, then their support is a drain on all of Germany. If, by selling your product abroad at a lower price than that which you sell at home, you can keep all of your men employed all of the time, then the foreigner is paying at least the cost of maintaining German workmen." Whatever may be said against the barbarous methods of the military spirit of Germany, everyone must give that country credit for its

wonderful achievements in business, and much of this development was based on a protective tariff.

When the war is over, Germany, working on this basis, and possibly other countries, too, will flood this country with their products, to be sold at any price that can be had, for ready money will be essential, and they will crowd to the limit of their capacity, regardless of immediate profit, the selling of their output in the United States. We are facing the situation in this country of national preparedness in case of war. We must also face the situation of national preparedness to meet the war of industry and commerce that will be made upon us the very day the present war ends.

The Democrats are in a situation now where they can, as the Chinese say, "save their face" by changing the tariff, based on the needs of the war situation. We must have more revenue, and some of this can be secured by revising the tariff upward. About \$50,000,000 a year can be saved or secured by restoring the duty on sugar. There is justification for this from the political as well as from the business standpoint, and if the Democrats fail to utilize this opportunity, and to do it promptly, as soon as Congress meets, the MANUFACTURERS RECORD feels safe in predicting that this will be the last time the Democratic party will be in power for many years to come.

The business people of the South can well afford to study this situation and make known their views as to the need of immediate action to safeguard the industries of the nation as the President and others hope to safeguard it against the possibilities of war.

THE DAY OF OPPORTUNITY IN THE SOUTH'S IRON AND STEEL MUST NOT PASS UNUTILIZED.

IN all the history of Southern iron and steel development there never was a time so important as the present for broad, constructive upbuilding work by those who are in touch with the South, by those who are interested in its iron and steel industries, by the railroads of this section, by the capitalists controlling these roads and who already have many millions invested in other enterprises in the South. As recently stated in the MANUFACTURERS RECORD, the enormous war orders from Europe are crowding to the utmost limit of their capacity the great iron and steel plants of the East and the West. The rise of the Bethlehem plant into a rival of the Krupps in size and output, the amazing achievements that have been made by many other companies in the enlargement of old plants and the building of new ones, have created a condition in the East and West never before seen in iron and steel. These developments mean that the entire iron and steel machinery business of the country will be lifted to a higher plane than would have been possible under ordinary conditions in ten years of natural growth. These plants will be so magnificently developed and equipped that when the war is over they will be in position to go forward on a far larger line of work than ever before to produce a higher grade and a wider variety of output than ever in the past.

Under such extraordinary conditions the iron and steel interests of the South practically stand still. No great constructive work adequate to meet the situation is under way, and one of the most tremendous opportunities which the South has ever faced in its whole industrial history is in danger of being lost. If this section does not, during the present boom in iron and steel, brought about by war activities, take advantage of the situation as the East and West are doing, it will be left far, far behind in the race in the future. Every year will show the South retrograding relatively as compared with the growth of the country in iron and steel if we fail at the present time. The situation is one to stir the activity and enthusiasm of every man in the South who is able to achieve things. Yet, at the same time, it ought to be possible to enlist in the varied industries of the South, especially in iron and steel, the active, vigorous co-operation of all the great financial leaders of the country, who have millions, and, in the aggregate, hundreds of millions, staked upon the prosperity of the South.

Moreover, there is another phase of this situation which should appeal with tremendous force to the American agents of the Allies, as well as to the

direct representatives of the Allies. It is this: The great efforts that are being made among the foreign workmen in the East and West to bring about strikes in order to prevent the making of war munitions is a danger to this country itself, as well as a danger to the Allies in the getting of their supplies. In the South, on the contrary, there is less of the foreign element than in any other part of the United States. There will be less danger in the South of labor agitations, such as we have seen in the East and the West. This section has less foreign element than any other part of America, and, outside of the negroes, is more pre-eminently Anglo-Saxon in its civilization than any other part of this country, and, indeed, probably has less of outside blood mixture than any other country in the world. The placing of large orders for war supplies throughout the South would, therefore, have many advantages in safeguarding the interests of this country in the development on a large scale of the metallurgical interests of the South and in safeguarding the orders placed by the Allies here. Neither this section, nor the railroads, nor the capitalists of the South, nor the capitalists of other sections interested in the country and its future, nor the American agents, nor the direct representatives of the Allies can afford to ignore the situation.

DANGERS OF A CAR SHORTAGE.

A CIRCULAR-LETTER addressed to railroad companies, shippers and consignees of freight has been issued by the Maryland Public Service Commission saying:

The present indications are that there will be an unusually heavy movement of carload freight, such as grain, coal, cement, fertilizer, etc., during the fall months, and the railroads will probably find it difficult to furnish a full car supply.

The interest of shippers and consignees, as well as the interest of the railroads, can best be served by the prompt loading, unloading and handling of cars in order that the maximum service can be gotten out of the equipment.

That the request for co-operation of all concerned which the Commission adds to its letter is amply warranted is shown by reports from authentic sources concerning the general railroad situation, and particularly with reference to the surplus of idle freight cars. On September 1 the number of idle cars reported in the entire country was 183,659, and although this was more than the number of cars unemployed on the same date of last year, it was a decrease of 81,705 from August 1, 1915, and with the rush crop season rapidly approaching it was enough to cause alarm.

A report from New Orleans says that a car shortage is being felt there, and that several traffic officials feel that the situation is such as to cause them much concern. Owing to heavy rains, the threshing of grain in the great agricultural regions of the West and Northwest was much delayed, and cars which were sent there to carry out the grain had to be held while considerable of the crops went into the elevators for conditioning before being sent to market. Thus these cars have been held in service longer than would ordinarily have been necessary, and their release is still being awaited. It would not do to remove them from the grain sections and employ them elsewhere, because they could not be returned in season for the important work of crop moving.

This is a grave sign to have a lack of cars so early in the fall, especially when traffic in all lines of trade is growing fast. There is talk of serious congestion of freight at terminals being possible, although the railroad officials are doing all they can to prevent it. The car shortage, owing to the delay in transporting the grain crops, interferes with outbound freight, but it is hoped that an early release of grain from the Western elevators will soon occur and the cars come pouring down to the seaports. Down on the Texas coast heavy crops of corn, rice and cotton are reported, and the movement of large quantities of corn is already under way. Much rice is also being moved, not to mention cotton.

In other parts of the South the reports of crop conditions likewise indicate heavy movements in progress or impending, and the warning of the Maryland Public Service Commission should be widely heeded to relieve the situation of the likelihood of tension at a season when everything to make it easy is most to be desired.

PUBLIC WORKS ACTIVE IN THE SOUTH.

SAVANNAH and Chatham county, Georgia, the city being the county-seat, have voted, by a splendid majority, to issue \$900,000 of bonds for public improvements, and have thus added another item to a long and growing list of recently authorized large issues of bonds in various parts of the South, which is inspired throughout with a fine spirit of progress toward the objects of better roads, improved county, town and city buildings, sanitary sewers, water-works, electric lights, etc. In the instance of Chatham county the vote was "overwhelming," according to local reports, and there are many expressions of satisfaction and gratification concerning the result of the election. The two largest features of this particular loan are \$400,000 for schools and \$375,000 for a public road, but there are others which are also typical, such as \$50,000 for courthouse improvements and \$75,000 for a juvenile home and farm, all of which indicate the trend of endeavor looking to a betterment of conditions.

Especially for road building is the issue of new bonds active in Southern States. Florida is conspicuously busy with highway plans this year. De Soto county is offering for sale on October 1 \$350,000 of road bonds, and Pinellas county will vote on the 5th of the same month for \$715,000 of road bonds. Many other bond issues in the State for various purposes are likewise either voted or sold and much of the improvements planned are under way. Elsewhere public works are meeting with similar encouragement and some large loans have been approved. St. Francis Levee District in Arkansas has sold \$1,000,000 of bonds for levee and re-vestment work; Grayson county, Texas, lately disposed of \$862,000 of road bonds; Montgomery, Ala., sold \$100,000 for paving; Aransas county, Texas, has voted \$300,000 of road bonds; Jacksonville, Fla., lately voted \$500,000 for sewers, drains and streets; Shreveport, La., will vote in November on \$1,200,000 of water bonds, and so the march of improvement goes on.

It is notable that there are a great many small loans, in amounts less than \$50,000, some of them being as small as one-tenth of that figure, these little issues being generally by the smaller towns and villages which have caught the spirit of enterprise and follow in the pathways marked out by the larger places, although it happens in some cases that the little places are pioneers in the work of betterment, starting ahead on their own initiative and accomplishing wonders in a modest way, besides setting an example to others and encouraging them to do likewise.

Most of these loans are made at 5 per cent., although there are some places which issue 6 per cent. bonds, or maybe $5\frac{1}{2}$ per cent., while there are others which favor $4\frac{1}{2}$ or 4s, even if they sometimes find they have to accept bids for less than par. In the case of small issues \$100 denomination bonds are frequent, and sometimes they are offered in the larger issues, as well as denominations of \$500 and \$1000. This consideration for small investors has apparently been found to be of advantage; it has enlarged the market for public loans and has thus increased their popularity and opportunities of sale. This, of course, means that when loans are offered by States, counties or towns they will have a better chance of receiving satisfactory bids and also a more rapid absorption by the investing public.

WELL DONE, MR. HOLMAN!

IT is the province of genius to articulate the unformed thoughts of the masses, to put in glowing words the feelings that are common to a large portion of mankind, but that have never before reached the point of expression in language.

There is no more artistic operator in this line in the field of journalism than Alfred Holman, editor of the Argonaut of San Francisco. An example of his dexterity is presented in another column with the title, "Mr. Ford's Omniscience," referring, of course, to our Henry. Mr. Holman deserves the thanks of the nation for his service in behalf of a common-sense appraisal of Mr. Ford.

HOW THE WILD POLITICIANS MISSED IT AGAIN.

A YEAR ago a few politicians who can always be counted upon to do the wrong thing were filling the earth with their predictions of hopeless bankruptcy for the South unless the United States Government spent somewhere from \$250,000,000 to \$500,000,000 in buying up cotton and storing it. According to their ceaseless wails, cotton was tobogganing down to the lower regions of prices, and they made the farmers of the South, to a considerable extent, lose all faith in the value of their cotton.

Despite these direful predictions of the men whose publicly-expressed views are always so certain to be wrong that the safest gamble going would be to bet on the opposite side of whatever they proclaim, cotton kept on advancing. Possibly it may be that the natural gas which they emitted helped to inflate it and cause the rise.

Notwithstanding the dismal failure of all their predictions last fall, and events always prove their predictions to be as light as "the airiest bubble that ever found lodgment in an empty head," the same men during the summer and early fall have been making equally direful predictions about the bankruptcy which would face the South this fall unless the United States Government compelled Great Britain to lessen its blockade of Germany's ports. Indeed, one of these predictors of dire events wanted our battleships to be loaded with cotton and sent to Germany, or was it that he wanted our battleships to accompany every cotton cargo that was headed for Germany? Then no English ship would dare molest our cotton! Then no Englishman would dare attempt to keep our cotton from Germany and the neutral ports through which Germany has steadily bought cotton!

What a vision of poverty and bankruptcy affrighted these politicians and made them seek to frighten the South! But, like their predictions of last fall, none of them have come true. Instead of going down to the lowest depths of perdition, as they proclaimed, cotton has been steadily going up.

They told us that the South faced a far worse condition than last year. They told us that poverty would rule the land, and even some few business men, misled by such political stuff, or misled by those who sought to curry favor with such politicians, took the same view.

Fortunately, however, cotton heeded not their wailings. Cotton, knowing its own intrinsic value, pursued the even tenor of its way, rising steadily, whereas they had said it would go down steadily. The farmer had learned not to heed their wild vaporings; he had learned to trust his own good judgment as better than theirs, and if perchance the advice of the MANUFACTURERS RECORD, spread broadcast through nearly every paper in the South, urging the farmers not to be frightened and not to sell their cotton at a low price, had some effect, we shall be glad to have contributed to the good work.

But, at any rate, the South, instead of facing bankruptcy, is facing abounding prosperity.

THE NATION'S INTEREST IN LOUISIANA'S SUGAR INDUSTRY.

UPON the attitude of the Administration toward the tariff on sugar will depend the continuance or the obliteration of the Louisiana sugar industry, reports from New Orleans state. If the tariff is fully removed next April, as it is provided that it shall be by the Underwood-Simmons law, there will be no planting of sugar in Louisiana in 1916, so representative sugar men of New Orleans are quoted as saying.

In Louisiana it is necessary to replant cane every three years. As in this latitude cane does not come to seed, the crop is renewed by planting a joint of the stalk, from which the plant sprouts. About one-third of the acreage is required for a planting.

"The planting for the 1916 crop would represent an expenditure of \$6,000,000, and if the sugar provision of the tariff law is to go into effect in 1916, we might as well take our \$6,000,000 and throw it into the river as use it for planting," a New Orleans planter is quoted as having said. This would mean

that all of the 1916 crop would be ground up, and with possibly a final grinding of the diminished crop that would spring up the following year, the century-old sugar industry of Louisiana would become extinct.

As the tariff on sugar has brought a revenue to the Government of \$50,000,000 or \$60,000,000 a year—a revenue easily and cheaply collected by the Government, and constituting a wholly imperceptible tax on the public—there is a widespread disposition to wonder whether President Wilson and his followers in Congress will embrace the present opportunity to diminish a deficit in Government receipts by retaining the tariff on sugar, or will elect to issue bonds or levy more income or "war" taxes and leave the sugar industry of Louisiana to its doom.

The Governor of Porto Rico is in Washington to influence a change of attitude on the sugar tariff if he can, as Porto Rico will be an almost equal sufferer with Louisiana if sugar goes on the free list. A Louisiana delegation will shortly visit Washington with the same end in view, so New Orleans authorities report.

In the line of preparedness it is held in some assumptively patriotic and intelligent quarters that a nation would be better off in times of peace and immeasurably so in times of war if it were not wholly dependent on outside sources for its supplies of the necessities. With a moderate tariff, the United States would in the course of a decade or two most likely be in position to furnish all the sugar this country requires. With sugar on the free list, the industry will die in Louisiana and the beet-sugar industry will shrivel up, and in the case of the cane crop, when once destroyed, it will be obliterated from the United States probably forever. Thus the United States would have to spend money abroad for sugar if at peace with the world, and would have to go back to maple sugar and sorghum molasses—and mighty little at that—if at war with a world Power.

A hundred million dollars' worth of plantation property—grinding machinery, sugar-house equipment, etc., wholly useless for other purposes—would be wiped out if the Louisiana sugar industry is destroyed. And who would be the gainer, outside of the sugar trust?

What does constructive statesmanship have to say?

THE BRAZOS TYPICAL OF MANY RIVER IMPROVEMENT OPPORTUNITIES.

CITIZENS of the Brazos Valley in Texas will meet at Bryan October 12 to perfect an organization in behalf of flood prevention and navigation on the Brazos River between Waco and the mouth of the river, just below Freeport. Agricultural, industrial and commercial interests in the Brazos Valley and contiguous territory, covering twenty-three counties and embracing 35,000 square miles of territory, are affected by the improvements named, and all these interests are expected to join in the organization proposed.

The bottom lands of the Brazos are among the most fertile in the world. Floods are of almost yearly occurrence, the losses from which run up into the millions whenever they occur. Under control and made navigable, the stream would serve a highly populous territory, becoming in time one of the richest in the world. European streams of not half the size of the Brazos have been made the carriers of an enormous volume of commerce, with trading places thickly dotting the banks of the stream. The Brazos, from the Gulf to Waco, is susceptible of development for large-sized vessels. The Inter-coastal Canal, a commerce bearer of immense potentialities, meets the Brazos near Freeport, and thus the improvement of the Brazos for navigation would put the entire territory, from Waco to the sea, in command of a network of navigable waterways.

Would that the men in Congress and the scribblers on newspapers, who so glibly jabber about "port barrels," were to ascertain how the commerce of European countries has been vastly expanded and the wealth of cities and districts tremendously enhanced by lavish expenditures for making small streams navigable! Merely to state the case in the matter of the Brazos proposition were sufficient to enlist universal commendation.

Potash and Southern Agriculture: Views of Leading Fertilizer Manufacturers on Subject

As the fear has recently been expressed that the shortage of potash might possibly lessen the South's ability to produce crops to advantage, the Manufacturers Record has secured from a number of leading fertilizer manufacturers of the country their views on this situation. It is the consensus of opinion, not only of these manufacturers, but of agricultural authorities, so far as we can learn, that there is a very large amount of unutilized potash in soils which for some years have been so freely supplied with potash in the fertilizers used, and that this potash can be made available by the right kind of treatment and thus for the coming year at least furnish what is needed for crops.

More than this, however, we believe that the fertilizer people will be able to manufacture fertilizers which will meet the needs of the soil, and at the same time use far less potash than for some years. It should be remembered that until the German syndicate, backed by the German Government, began its active propaganda in this country some years ago to make the public believe that a large amount of potash was absolutely essential, we were getting along fairly well without much potash. The German syndicate, by its vigorous propaganda and the expenditure of a vast amount of money, made many of our people believe that a large amount of potash was absolutely essential. Before that we had lived and agriculture had developed, and the South as well as the rest of the country was making splendid progress without much potash. It is well to bear these facts in mind in order that there may be no undue alarm in regard to the shortage of potash.

More important, however, than anything else in connection with this situation, as we view it, is the fact that this very shortage will stimulate farmers of the South and other sections to more intensive and better cultivation. They will begin to study how to make the best of the situation and how to secure the largest results independent of potash. It will also turn their thoughts more and more to increasing grain and livestock production, and in this way a movement will be started for the enrichment of Southern soil, which will vastly exceed in importance any possible loss from a present shortage of potash.

No one need for a moment imagine that the South will not progress agriculturally because of present conditions in the potash supply.

CONFIDENT SOUTHERN FARMERS WILL MAKE GOOD CROPS.

Etiwan Fertilizer Co., Charleston, S. C.

Potash is undoubtedly a very valuable and desirable fertilizer material, but we do not consider it indispensable.

What is known in this section as "complete fertilizer" contains the three principal elements of plant food: available phosphoric acid, ammonia and potash. A fertilizer containing these three ingredients is, generally speaking, by far the most desirable fertilizer to use on most crops, but the most necessary of these three ingredients is available phosphoric acid, as this is the element required to mature the crop and make the yield, the ammonia giving the foliage and increased size of the plant, and the potash contributing to the strength. We do not contend that a fertilizer containing only available phosphoric acid and ammonia without potash will be as satisfactory or give as good results as with potash, but it will be both beneficial and profitable to use, and we believe there have been many experiments made by the agricultural colleges and experiment stations that prove this to be so.

We would like much to have potash salts to use in the manufacture of our fertilizers this year, and we do not underestimate their worth in any way, but at the same time we do not feel that we are so hopelessly lost without this ingredient, and are quite confident that the Southern farmers will succeed in making good crops of corn and cotton with such fertilizers as the manufacturers will be able to supply them.

POTASH ENOUGH IN THE SOIL FOR ONE OR MORE CROPS.

A. C. READ, President Read Phosphate Co., Nashville, Tennessee.

It is true that the impossibility of securing potash from Germany will have an important bearing upon the successful growing of cotton in certain sections of the South, especially in the sandy lands of the Southeast. The absence of potash application will doubtless have considerable effect upon the yield of cotton, but I do not think that it will by any means make the growing of cotton an impossibility or an unprofitable investment.

Prior to the Civil War and for 15 or 20 years thereafter, little or no potash was used by the farmers in any part of the United States. For the last 15 years the applications of potash to those soils where it was

most needed have been very liberal, and I believe for the next year or so the farmers can get on with very moderate applications, and, in many sections, they may possibly get along fairly well without any. I do not mean to say that they could make maximum crops, but at any rate the farmers could secure fairly good yields.

There is still in the country considerable amounts of the lower grades of potash, such as is not used by the chemical and explosive people, but which is entirely available for fertilizing purposes. This stock will doubtless be of great value and assistance for next spring seeding, but after next spring there will probably be very little, if any, left in the country unless importations are resumed, and apparently this cannot be expected until the war is over.

Altogether, I do not see why, with the proper cultivation and the use of the other forms of plant food, viz.: nitrogen and phosphoric acid, the farmers cannot make reasonably good crops of cotton next season. This can be more readily appreciated when it is understood that after all commercial fertilizers are nothing more or less than concentrated manures. If a man has manured his land heavily for many years and has got it in good condition by so doing, it would not at all follow that he would make a failure of his crop because he omitted manuring for a year or so. He might not make as large crop, but still, with rich land, he ought to be able to make fairly good crops before the land would show signs of exhaustion.

CAN GET ALONG ONE YEAR WITHOUT POTASH.

F. S. ROYSTER, President Royster Fertilizer Co., Norfolk, Va.

When war was declared I immediately wrote to the departments of agriculture of all States in which we do business, and asked if in their opinion farmers would buy fertilizers without potash if importations should cease. They were unanimous in saying that they could get on one year without potash, as they had been very lavish in the application for years and that they could afford to dispense with it for one year. We were fortunate in having an ample supply for the present year, but there seems no chance to obtain a supply for 1916 unless France succeeds in getting back the Alsatian mines. We are of the opinion that phosphoric acid and ammonia will be the only elements of plant food obtainable from the present outlook, as you doubtless know the consumption was greatly decreased this year

in South Carolina and Georgia, at least 50 per cent., which is telling materially on the yield.

I am of the opinion that the consumption of fertilizers will be quite as large in 1916 as it was this year with potash left out.

I think farmers will be influenced very much by advice given from the departments of agriculture.

SOUTHERN FARMERS TO BECOME MONEY LENDERS.

J. W. ROBINSON, Vice-President Morris Fertilizer Co., Atlanta, Ga.

As to whether profitable crops can be raised in the South without potash, this is a much mooted question about which opinions are greatly divided and one which time alone can determine. All concede that potash is essential, but many farmers and manufacturers are of the opinion that with the heavy potash applications of former years there may be a sufficient residue in the soil to make next year's crop—this view having especial reference to the heavy clay soils, as opposed to sandy soils.

Many manufacturers are, however, resorting to the use of animal organic ammoniates and fish in their fertilizers, on the theory that the chemical action of this class of ammoniates on the inert potash in the soil would release a fair percentage of the natural potash present in all our Southern soils.

We might remark in this connection, however, that so far as loans to Southern farmers are concerned the present indications are that they will reverse the usual order next year and become lenders instead of borrowers.

USE OF HIGH-GRADE FERTILIZERS WILL INSURE NEXT YEAR'S CROPS.

S. T. MORGAN, President Virginia-Carolina Chemical Co., Richmond, Va.

Of course it is pretty early yet to say whether or not we will have a supply of potash for next spring. That there will be some potash, all of us know. Some small stocks of potash may be carried over from the spring, and there are a good many sources from which potash is being and can be derived—potash that is absolutely suitable to the crops, being water soluble and first-class material in every way, but of course this is limited.

For several years past the farmers of the South have used quite an abundance of potash. I don't claim that they have used too much. I don't think they have; but the applications of potash have been heavy, and I think some still remains in the soil, in all probability, and for one year's crops the soil would not require as much potash, in my opinion, as is ordinarily used.

I believe that for one year the farmers of the South can get along with a very much lower percentage of potash than they have previously consumed. I doubt, however, if this principle would work for longer than one year, because most of the soils (not only in the South, but just as well in the East and West) require potash to make satisfactory crops.

We believe, however, that some of the deficiency which may be caused by the very much decreased use of potash can and will be made up by a largely increased use of available phosphoric acid and ammoniates. We are satisfied that the farmers of the South (and, in fact, of almost all sections of the United States) use very much too little of available phosphoric acid, and on many crops very much less ammonia than should be used to get the best results. If the farmers will make up the deficiency in potash this year by an increased use of phosphoric acid and ammonia, we believe that the falling off in the crops will not be as marked as some might fear, particularly where large quantities of potash have heretofore been used, and likewise on certain soils where a large quantity of potash is not always necessary.

Do not understand that I depreciate in any way the use of potash. We are thorough advocates of it, and we believe in the use of it; but we are of the opinion that for the next season reasonable crops can be and

will be grown without the use of anything like the amount of potash that has been the custom of the farmers for the last few years.

What would be the worst thing that could possibly happen to the agricultural classes of the country (not only in the South, but in the North, East and West as well) would be for the farmers to use little or no fertilizers because they could not get the amount of potash they want. If they should adopt the plan of using little or no fertilizers, for the reason that they could not get as much potash as they want, they would certainly, in our opinion, make almost a failure in growing their crops. We shall advocate the increase of other ingredients to make up any deficiency that may be caused by the shortage in potash.

This is merely to give you my views hurriedly and simply our ideas of the situation. We expect to push our fertilizers this year more vigorously than for several years past, and believe now is the time to put out high-grade fertilizers so as to enable the farmer to make satisfactory crops. We shall bend our energies to the utmost to encourage the farmers all over the country to use high-grade fertilizers, carrying ammonia and phosphoric acid, more than sufficient in units of plant food to make up the deficiency in the amount of potash.

This letter is a personal one to you and not intended for publication. However, I have no objection to your using it if you care to.

SOUTH WILL BE ABLE TO GIVE GOOD ACCOUNT OF HERSELF.

M. V. HASELDEN, President The Macmurry Company, Charleston, S. C.

I note with a great deal of interest that some people in the East who have, heretofore, been loaning money to Southern farmers are now disturbed for fear that without German potash profitable agriculture in portions of the South will not be possible, and that a Georgia subscriber has received a letter from an official of one of the lending companies, in which he makes the following statement: "Being barred from further importation of German potash, what are your farmers going to do for fertilizers without which no paying crops can be raised on Georgia land? What have you to offer in rebuttal of above?"

The farmers of the South have for years applied to their lands fertilizers containing an average of at least 3 per cent. potash, which is more than any crop can take out of the soil in any one year, and the consensus of opinion is that these lands have accumulated potash each year and that there is now sufficient potash in the land to grow profitably any of the crops usually planted. In addition to this, there are a great many fertilizer ingredients to be had that contain potash; for example, cottonseed meal contains 1½ per cent. to 2 per cent. potash (K₂O), castor meal 1 per cent. to 1½ per cent. of potash, both of which will no doubt be used largely the coming year. There are other materials also that might be mentioned that contain some potash.

It is understood that the fertilizer manufacturers of the South have sufficient potash on hand to supply goods containing at least 1 per cent. potash, so with what has been left over in the land from year to year, due to heavy applications of potash and with at least 1 per cent. applied the coming year, there is no reason to doubt that the South will be able to give a good account of herself so far as being able to raise a profitable crop of cotton, corn, tobacco, etc.

Before the German potash propaganda was started, which was only a few years ago, the farmer of the South used practically no potash, and if you will review the cotton statistics for the past twenty-five years you will observe that the South produced very large crops of cotton and other crops during that period when potash was not known to be worth anything much in an agricultural way and was not used at all.

NO FEAR THAT CROPS WILL SUFFER FROM LACK OF POTASH.

GUSTAVUS OBER, JR., President G. Ober & Sons Co., Baltimore, Md.

Potash, of course, is one of the three principal ingredients of plant food, but only one. The fertilizer manufacturers have ample supply of phosphate rock, acid phosphate and various ammoniates, which are the

other two principal ingredients used. Some even have limited supply of potash.

Potash has been used in large quantities for the last number of years in the South, and crops can undoubtedly be raised for a year or two without the further use of this ingredient, and by using a fertilizer containing available phosphoric acid and ammonia.

All soils contain large quantities of insoluble potash. This potash can be rendered partly soluble and available for plant absorption by certain ingredients that can be placed in fertilizer. Undoubtedly fertilizers will be made containing available phosphoric acid and ammonia and other ingredients that will give excellent results. We have not the slightest fear that crops will suffer unduly from the lack of potash for the next year or two, and with intelligent co-operation on the part of the farmers fertilizers can be made and used with undoubted success the coming spring.

Manufacturers are at this time, in view of the foreign situation, preparing to go ahead along the above lines and will turn out fertilizers that can be used most profitably until potash can again be obtained.

NOTHING CAN DETER OR DETAIN THE SOUTH.

J. RICE SMITH, President Georgia Chemical Works, Augusta, Ga.

Our people in the South will not waste any time or take any cognizance of the propaganda now being distributed regarding loans to Southern farmers being discontinued on account of the absence of German potash.

I doubt if much, or any money, has been loaned direct to Southern farmers by the source resorting to this intrigue. If so, however, those farmers need not have any apprehension of inability to be accommodated elsewhere—from our Southern banks especially—their natural channel—upon more friendly and favorable terms.

I offer in rebuttal the following facts: There is yet some, not much, German potash here and there is some commercial potash produced in this country. There is an average of 1½ per cent. of available potash in each ton of our cottonseed meal, which will be used largely in commercial fertilizers. Then there is much potash in our soils that can be made available in part by better cultural methods, and our people, who are carefully reviewing the situation, will, with these facilities at hand, prepare, provide for, plant and raise their crops with as great success as they did in years ago under circumstances much more unfavorable than exist now. Potash is an essential element in agriculture, but the absence of large quantities of German potash on crops the coming year will not decrease the acreage for planting or make such planting either unsuccessful or unremunerative.

Let no one worry about the South. There is nothing of human effort or in human device that can deter or detain her in her future and greater development.

UNQUESTIONABLY PAYING CROPS CAN BE RAISED WITHOUT POTASH.

J. ROSS HANAHAN, General Manager Planters' Fertilizer & Phosphate Co., Charleston, S. C.

For years fertilizer made without potash was used successfully in the South under cotton and corn. In fact, in certain clay lands of upper South Carolina and Georgia comparatively little potash is used now. Unquestionably paying crops can be raised without potash or with only a small amount—certainly for a year or two, after so many years where applications have been so heavy.

SUFFICIENT COTTON CROP, AT GOOD PRICES, IS ANTICIPATED.

NORMAN H. BLITCH, President Combahee Fertilizer Co., Charleston, S. C.

The South is not entirely barred from all potash. The quantity of potash, of course, will be limited this coming year, but with the present high state of fertilization of most of the lands in the section that requires potash, with what fertilizer they will be able to obtain, we feel no uneasiness in regard to their making a moderate crop of cotton the coming year of 11,000,000 bales of cotton.

This crop, we are satisfied, will be sold at a very much higher price, and will be made at a very much

lower cost than any that we have produced in many years, both of which we think, from a lender's standpoint, make a very satisfactory opportunity to loan as far as the credit risk is concerned.

POTASH REQUIREMENTS VARY ACCORDING TO THE SOILS.

C. H. MACDOWELL, President Armour Fertilizer Works, Chicago.

The question you ask is one difficult to answer. In the sandy and light soil sections of Georgia potash seems to be necessary to prevent cotton rust and to give profitable yields. This sandy section covers perhaps one-half of the cotton-growing area. The North Georgia hill section is not so dependent on potash. They have little trouble from rust and the clay soil contains considerable potash, but largely in an insoluble form. Lime might profitably be applied to such soils, as it tends to open up the clay, prevents its baking and liberates some of the insoluble potash. These soils, however, will not produce as heavily without an application of potash in fertilizers as with this element.

POTASH NOT ABSOLUTELY INDISPENSABLE.

W. H. MACKALL, Vice-President The Scott Fertilizer Co., Elkton, Md.

While potash has been used very largely and successfully in fertilizers, yet it is not absolutely indispensable. Cotton and other crops were raised before potash was discovered, and in many sections ground bone, acid phosphate and ammoniated goods without potash are being used successfully.

Industrial and Other Activities at Kissimmee.

Kissimmee, Fla., Sept. 25.—[Special].—A manufacturing plant to cost \$50,000, to employ a minimum of 50 men, with a weekly payroll of \$1000, will be constructed here by the new Tucker Brick Co., to put on the market the Wood-tex paving brick, a brick made out of cypress sawdust, recently invented by J. Wade Tucker of this city. "Construction work will begin within three weeks, and the plant will be finished within 90 days," Mr. Tucker announces.

The bricks are made of Florida cypress sawdust and hydroline, an asphalt composition, by a pressure process. A test of the new material has been made on the streets of this city, with what seems to be very satisfactory results. An area of five feet square was laid with the brick on a corner where traffic is the heaviest. They were put down horizontally on a bed of sand, with a slight grouting of tar. So far they have shown no signs of wear, and have a quality of coming together or cohering, which insures an even surface without cracks or holes.

The invention of the brick has attracted much attention in and outside of the State. An improvement league of New York has made inquiries in regard to it, and it is expected that an engineer from that city will visit this place as soon as the plant is in operation with a view of recommending its use on the boulevards of that city.

A campaign for municipal improvements has been inaugurated here by the Board of Trade. It includes a clean-up campaign, the establishment of municipal tennis courts, a golf course and a bathing pool, all accessible to the general public free, and designed to be a drawing card for winter tourists. The old matter of bulkheading the lake front, which will be the greatest piece of improvement work ever done by the city, is also being enthusiastically pushed.

\$500,000 Dye Chemicals Plant at Charleston, West Virginia.

A \$500,000 corporation, the Warner-Klipstein Chemical Co. of Charleston, W. Va., has been chartered to build a dye chemicals plant at South Charleston. Details have not been announced, but it is understood that the new company will arrange for a large factory. E. C. Klipstein, treasurer of A. Klipstein & Co., well known for many years as suppliers of anilines, dye-stuffs, chemicals and tanning materials, main office in New York, is an incorporator of the new enterprise. E. H. Klipstein, Franklin H. Warner, Harry R. Nelson and Lucien C. Warner, all of New York, are the other incorporators.

Is the South Doing Its Best? If Not, How Can It Achieve More?

No. 3.

In No. 2 of this series of articles, discussing the question as to whether the South is doing its best to achieve material and educational advancement, some amazing facts were presented in regard to the enormous increase of wealth in Kansas and Iowa. It was pointed out that these States, lacking the natural advantages of the South, had far exceeded the individual States of the South in the accumulation of wealth. Texas, for instance, though nearly five times as large as Iowa, and with nearly twice as much population, had in 1912 \$1,000,000,000 less wealth than Iowa. Missouri, which in area exceeds Iowa by 13,000 square miles and has a population of 1,000,000 in excess of Iowa, gained in wealth between 1900 and 1912 a total of \$2,600,000,000, while Iowa gained during the same period \$4,521,000,000.

Between 1900 and 1912 the value of the property of Kansas increased by \$2,677,000,000, while during the same period Georgia, with a population of nearly 1,000,000 in excess of Kansas, gained but little more than one-half as much as the gain of that State, or a total of \$1,446,000,000.

The increase in that 12-year period in Kansas was larger by \$294,000,000 than the total value of property in Georgia in 1912.

Similar facts were given in comparing the amazing progress of Kansas and Iowa with Alabama, Kentucky and Tennessee. None of these States have matched Kansas and Iowa in the rapidity of the accumulation of wealth. Based on this investigation, many questions were presented as to whether the South was doing its best, and if not, in what way can greater things be achieved.

When a study of the statistics of the increase of wealth in Kansas and Iowa developed such remarkable facts as presented last week, the editor of the MANUFACTURERS RECORD asked from the Governors of Kansas and Iowa a statement as to their reasons for this remarkable growth in wealth. In order that there might be no suggestion whatever to draw forth any particular line of discussion of the subject the letter of inquiry was carefully worded, and to the Governor of each of these States the following letter was sent:

Baltimore, August 24.

Dear Sir:

I have recently been making a little study of the remarkable increase during the last 15 or 20 years in the wealth of Kansas (Iowa). The census figures are exceedingly interesting, but, of course, they do not undertake to give the reasons for the amazing gain that has been made.

I would greatly appreciate it if you would write me even briefly, giving me your views as to some of the main causes that have been responsible for this increase in the wealth of Kansas (Iowa). The figures I have in mind do not refer to the last year or two of high prices of grain, but end with the census figures of 1912, the latest issued by the census for the entire country.

I am, of course, familiar with the remarkable agricultural development of Kansas (Iowa), and with its industrial advance; but outside of this it would seem there must be some cause for so great an accumulation of wealth as has taken place in your State in the last 20 years.

Thanking you in advance for any information you may give me, or any expression of opinion on the subject, I am,

Very truly yours,

RICHARD H. EDMONDS, Editor.

The replies received are exceedingly interesting. They deserve the careful study of every man desiring the broadest and best development of the South. The Governor of Kansas, after giving full credit to his State for its natural advantages and its fertile soil, attributes the growth in wealth to a very large extent to the prohibition of the whiskey traffic, to which he attributes not only the economic progress of the State, but the moral and intellectual advancement as expressed in education, in schools and in colleges.

Though Iowa is also a prohibition State, the Governor of that State makes no reference to prohibition in his discussion of the truly amazing advance made by his State—an advance which is so great as to almost stagger credulity.

THE CAUSE OF KANSAS' PROSPERITY AS VIEWED BY GOVERNOR CAPPER.

State of Kansas,
Arthur Capper, Governor.

Topeka, Kans., September 4.

Editor Manufacturers Record:

I am much interested in your letter of August 24. and

am always glad to get such questions as yours relating to Kansas.

The great wealth of Kansas, remarkable under any circumstances, but especially so in a Commonwealth a little over a half-century old only, is due, in part, to the cause you refer to; that is, to the fact that it is an agricultural State chiefly, with a very fertile soil. Not only agriculturally, but also industrially, it has made great progress, as you suggest. Kansas is not one of the greatest industrial States, still it ranked fifteenth according to the 1910 census figures, and the value of its manufactured products was greater than for any other State in proportion to the number of men employed, with the exception of one other State.

Kansas has, and has always had, an intelligent citizenship, recruited from the best elements of New England, Ohio and other States. This accounts, in part, of course, for the progress made and for the present wealth of Kansas, wealth, moreover, which is at least evenly distributed as in any other State. It is my belief, based upon considerable observation in various parts of the country, that the general average of material well-being in Kansas is higher than in any other State.

There is, however, a special reason for the progress made, and for the splendid and widely-diffused prosperity of our people.

I refer to the provision of the Constitution of the State of Kansas prohibiting the manufacture and sale of intoxicating liquors. It is this especially which differentiates Kansas from other States. Kansas has a prohibitory law better enforced for a long period than any other State.

Of course, the benefits we here in Kansas almost unanimously claim for prohibition are often denied. Kansas naturally is made the target of the liquor interests, of the "liquor power," for it is indeed a tremendous power yet in this country.

To put it in concrete form, and on a material basis only, Kansas is saving approximately \$30,000,000 annually directly, as compared with the average State, because Kansas drinks only about one-tenth as much liquor per capita as the average State.

And the indirect financial saving is scarcely measurable, but it is tremendous. Topeka and Kansas are the "home" of the great Santa Fe Railway system. The Santa Fe officials have frequently made the statement that labor in Kansas is more efficient than in other States traversed by this system.

Even more important than the economic benefits are the moral and intellectual benefits. If you will look up the last census figures you will find, for example, that Kansas has more students in her colleges than any other State by a wide margin, and besides she sends a large number to Eastern institutions. Topeka has 50,000 people. Last year the city had 1500 pupils in her high school. You would be interested in comparing these figures with those of other cities. I happened to learn some time ago that Milwaukee has just about half

as many high-school students in proportion to population.

Very respectfully,

ARTHUR CAPPER.

GOVERNOR CLARKE OF IOWA TELLS OF THE AMAZING PROGRESS OF THAT STATE.

Executive Department,

State of Iowa.

Des Moines, Iowa, September 10.

Editor Manufacturers Record:

Two weeks ago I received your letter making inquiry as to the cause of the wonderful increase in the wealth of the State of Iowa.

I laid it away in my drawer and because of other engagements in and out of the city I overlooked answering you as promptly as I ought to have done.

I may say that if the value of real estate is taken into consideration, as it should be, in the matter of the increase of the wealth of the State, that within the last 10 years, taking the whole State into consideration, lands I think have at least doubled in value. This to quite an extent in the northern half of the State has been due to the tile drainage of the lands, bringing into cultivation within the last 15 years thousands upon thousands of acres of the very finest and best lands that can be found anywhere. This fact has also added to the amount of agricultural products to a very great extent.

Accounting for the very great increase in the amount of cereal products in this State, principally of corn, wheat and oats, it may be said that it is also largely due to very greatly improved methods of farming. While ten or more years ago fall wheat was not producing in Iowa perhaps on an average of more than possibly 15 bushels to the acre (I do not take the time to look up the matter for an accurate statement), now thousands of acres are producing 25 to 45 bushels per acre.

There has been also a very large increase in the amount of oats produced per acre, and also of corn.

We have in Iowa perhaps the greatest agricultural college in the world. It is very generously supported by the State. Special trains for a number of years have been going over the State carrying lecturers and demonstrators of farm work and stopping along the way of the railway lines lecturing to the people, telling them how to farm, how to rotate crops and why there should be rotation. How to keep up the fertility of the soil. In addition to this, this extension work is carried on in many other ways than by the special train. The amount of good that has been done in the State in this way has been, indeed, wonderful. Improved methods of farming have gone forward with astonishing rapidity. The dairy interests of the State, especially in the northeastern quarter of it, have also been wonderfully developed in the same way. The products of the dairy in that portion of the State have wonderfully increased, and amount to very large sums.

In a manufacturing way the State has also wonderfully developed. The State's output of manufactured products runs up, as I now recollect it, to between \$350,000,000 and \$400,000,000. The increase has been really astonishing.

So far as the livestock industry is concerned, I think it would be conceded that for fine stock, including cattle, horses and hogs of all breeds, Iowa is not excelled by any other State in the Union. The livestock show that was made at the State Fair, which has just recently closed, is admitted by everyone from this as well as from other States to have been the finest that the world has ever made.

So far as our mining interests are concerned, we have only coal, but Iowa produces more coal than any other State west of the Mississippi River, with the exception of Colorado.

This, I think, will, in a measure, give you the information you desire. Very truly yours,

G. W. CLARKE, Governor.

Seeking further information on the subject of the progress of Iowa, a letter was sent to Capt. J. F. Merry of Manchester, who is probably as thoroughly informed about that State and about the Central South as any man living. Captain Merry was for many years, until he retired from active work, the industrial commissioner of the Illinois Central Railroad, always, however, maintaining his home on his farm at Manchester. In the long years of service in this capacity he spent much of his time in the Central South in working unceasingly

for the development of the territory tributary to the Illinois Central. During all that period, and since his retirement, he has been an occasional contributor to the MANUFACTURERS RECORD, emphasizing the resources and opportunities of the South.

In order to secure his views on the situation, and appreciating that he understood the South as well as he does Iowa, the editor of the MANUFACTURERS RECORD under date of August 20 wrote him as follows:

"I have recently been making some study of census figures showing the amazing wealth of Iowa and a few other Western States. Kansas people attribute a very large proportion of the progress and wealth of that State to prohibition long maintained and well enforced. Does the same condition hold true in Iowa, and, if so, is that one of the fundamental reasons for the enormous increase in the wealth of Iowa?"

"Of course, I am fully aware of the great production of grain and livestock in the State, but I would like to have from you any information that you can give me as to causes other than the purely material things indicated in agricultural and mineral production (and the mineral interests are not large) which have contributed to the prosperity of the State."

In reply to this letter Captain Merry, under date of August 23, wrote:

"Replying to yours of the 20th inst., your question is a hard one to answer, as we have no figures that would determine just how much the State of Iowa has been benefited from the Muley law, which is in force in this State. As a total abstainer, my views are that the State has benefited materially by the partial control of the liquor question, such as we have had, but my neighbor across the street, who is not a total abstainer, might think business had been injured by these same conditions."

"You no doubt have noted that the last bank report indicates Iowa's deposits were over half a billion dollars. My theory is that these deposits have been at least slightly increased by deposits from men who formerly spent their money for drink, but just to what extent it is impossible to say."

"Indeed, I think if you should attempt to make it appear that our great prosperity is due to the manner in which the liquor question has been handled that you would introduce a line of argument that you might not be able to sustain. Here in Iowa we think our marvelous agricultural resources, our intelligent cultivation of the soil, our diversified crops, etc., are what have given us the distinction of being the greatest State in this Union."

"Am sorry I cannot give you something that would aid you in the article you are about to publish."

This letter from Captain Merry necessitated another letter to him in order to bring out clearly certain phases of this discussion, and hence on August 25 the following letter was sent to him:

"I have yours of August 23, and thank you for the views expressed in your letter in regard to the situation. While I am prepared to grant to Iowa full credit for its wonderful agricultural advantages, there must be some other reason than purely that of agriculture which has resulted in such an accumulation of wealth. This may be the diversification of its agriculture; it may be, in part, living at home and raising its own food supplies of all kinds; it may be the wisdom of the people in economy and in making wise investments, and it may, in part, be due to prohibition."

"How long has the prohibition law been in effect?"

"It is not in my mind to undertake to prove that Iowa's prosperity is due to prohibition. I only want to find out how much effect it has had on the prosperity of the State, and what other causes may have contributed to the amazing increase of wealth in Iowa."

In reply to this he wrote, giving some exceedingly interesting facts about the progress of that State, and in this letter made the statement that the deposits in the banks of Iowa amounted to half a billion dollars, and that of this, unquestionably 75 per cent. is farmers' money. His letter is as follows:

"On my return from the Iowa State Fair at Des Moines, find yours of the 25th ult. As I remember it, our prohibition law was first passed in '82, but was declared unconstitutional, after which we passed what is known as the 'Muley Law,' under which we are now operating. This requires that before any community can have a saloon they must secure 65 per cent. of its voters to a petition in favor of it. This, of course,

enables such towns as Manchester to wipe out the saloon, and in our case, as in many others, the friends of the saloon have not been able to secure the necessary percentage of names to a petition. There is no question in my mind but what the temperance sentiment which obtains in most of our towns except along the rivers and a few in the interior have done a thriving business, but on the whole the sentiment in Iowa is for temperance, and the first of next January we wipe out every saloon in the State."

"Iowa has a progressive class of citizens. Our farmers, practically all of them, take one or more agricultural papers. They read them, and in that way are enabled to keep up with the procession and with all advance theories that seem to them practical."

"Iowa pays a good deal of attention to her schools, and it may be fairly considered as one of the very best States in this Union, and yet the last census showed that instead of gaining in population we lost, but I think this is accounted for in the fact that so many of our people had become comfortably well off that they sold out and thousands of them went to Southern California, Texas, the Puget Sound country, Florida and other Southern States. They had made a sufficient amount of money in Iowa to enable them to have homes wherever they felt disposed."

"Another noticeable feature among our Iowa farmers, for we have an agricultural State, is that they not only understand their business, but they are workers from early morn to late at night, and this State, as shown by the last bankers' report, had over a half billion dollars on deposit. Unquestionably 75 per cent. of this is farmers' money."

"I am glad you are going to make some reference to Iowa, for I know it will be good, and that it will be handled along lines that will be appreciated by our people."

This correspondence, with the Governors of Kansas and Iowa, and with Captain Merry, is presented in full in order to bring out the facts. The illuminating letters from Governors Clarke and Capper and Captain Merry are worthy of careful study by the whole South. They at least show that prohibition does not prevent prosperity, and that no one in the prohibition States of the South need ever fear that broad development and increasing prosperity will be retarded by prohibition.

Mr. Ford's Omniscience.

[The Argonaut of San Francisco.]

Mr. Ford has placed the world in his debt by the manufacture of a cheap and efficient automobile, and he deserves all the credit of a useful achievement. Incidentally Mr. Ford has amassed a large fortune, and we may therefore congratulate ourselves that virtue is sometimes rewarded. Certainly it is not always so.

And here we would willingly allow Mr. Ford to rest on his laurels and to acquire such further notoriety as he may from the headplates of his ubiquitous machines and from the distinctive variety of humor that those machines seem to inspire. But public opinion has willed it otherwise. The fact that Mr. Ford makes alleged automobiles in incredible numbers, and quite real dollars in equally incredible numbers, appears to be regarded as valid evidence that he possesses a wisdom that may be described as encyclopedic in point of size and apostolic in point of virtue. Mr. Ford's opinion on all matters of human interest has, for some unaccountable reason, acquired a value in the public mind above that of rubies. Innumerable people consider it to be final and conclusive. As soon as the usual headlines announce that the oracle has spoken, or rather that it is still speaking, they heave a sigh of satisfaction that one more world-old problem has been solved.

Mr. Ford, for example, has opinions on penology, and they are received with bated breath as from a god. He has made the profound discovery that if you pay to a burglar a salary somewhat in advance of a precarious professional income and free from the usual professional risks he will henceforth cease to be a burglar. The world of philanthropy is forthwith shaken to its foundations. Crime is prospectively abolished by the simple expedient of paying an adequate remuneration to the criminal classes. Mr. Ford's last word on the subjects of crime, prisons, judges and police is received as an evangel. And all this for no better reason than

the excellent quality of Mr. Ford's automobiles! Is it possible for the non sequitur to go further than this? Here we have the veritable triumph of inconsequence.

And now Mr. Ford, still inflated by a proud realization of the efficiency of his automobiles, invades the sphere of international politics, and once more the public prostrates itself at the feet of an omniscient beneficence. We have not troubled to ascertain Mr. Ford's opinions on the munitions question, not believing that they can possibly matter much, if at all. But the headlines inform us, as usual, that Mr. Ford has opinions, and that he is willing to communicate them to a gasping world, that he has indeed done so, and that the public has received them with the usual interest. The range of Mr. Ford's opinions is so vast as to render adequate comment impossible. Indeed, it is not only vast, it is cosmic. Mr. Ford will discourse to us on economy, thrift, hygiene, profit-sharing, suffrage, criminology, reform, sanitation, prohibition, war, peace, arbitration and piety. If there are any problems that he has not yet solved it is because he has not yet heard of them. Day by day we are invited to drink at the perpetual spring of wisdom undefiled, until at last the sight of a Ford automobile produces a sort of millennial affluence that deserves an honored place among the uplift tendencies of the day.

It is a weakness of the modern mind to assume that proficiency in one direction implies proficiency in all directions; that because a man has done one thing well he can do all things well; that because a man is wise in one way he is wise in all ways. Mr. Ford makes good automobiles; therefore his views on pacifism ought to be received with a profound reverence. He has become a millionaire; therefore he is probably right on criminology, or hygiene, or whatever the hysteria of the moment may happen to be. A few years ago we were summoned by newspaper trumpets to gather around Mr. Edison while he explained to us that he did not believe in God. Mr. Edison's opinions about God were supposed to have some extraordinary value on the ground that Mr. Edison had invented so many telephones and phonographs. Now if we had been invited to learn God's opinion about Mr. Edison—doubtless a favorable one—we should have obeyed with alacrity. But we were not able to see that Mr. Edison was in a position to know more than anyone else about God. But the public seemed to be impressed. It seemed to suppose that Mr. Edison would probably have some kind of exclusive information, some sort of private wire. And so it goes, as Mr. Dooley would say. But surely it would be better that the shoemaker should stick to his last, Mr. Edison to his inventions, and Mr. Ford to his automobiles.

Honoring the Inventor of the Incandescent Lamp.

It is proposed to have an Edison Day, October 21, to commemorate the thirty-sixth anniversary of the invention of the electric incandescent lamp. Interesting reminiscences of the various steps taken by Mr. Edison in working out the perfection of the incandescent lamp are going the rounds of the newspapers, accompanied by illustrations showing the boyish-looking Edison of that day as compared with the Edison of today, and including pictures of the first incandescent lamp, the Edison laboratory at Menlo Park at the time of the invention of the incandescent lamp, and early lighting stations in New York and elsewhere.

One feature of the commemoration will be Edison Day at the Panama-Pacific Exposition, San Francisco.

Royal Block Coal Co. to Begin Mining.

One thousand tons of coal is expected to be the daily output of the Royal Block Coal Co., organized with main office at Madison, W. Va. This company will develop 1110 acres of coal land, operating No. 5 block coal seam, on Horse Creek of Little Coal River, on property of Horse Creek Coal Land Co. of Charleston, W. Va. It will install electrical cutting and hauling machinery, gravity screen, etc., and is now opening four drifts, while railway and sidings are being constructed. S. E. Bradley, president-treasurer; H. G. Shaffer, secretary, both of Madison; J. F. Thompson, vice-president; Mistletoe, W. Va.; J. B. Ramage, manager, Ramage, W. Va.

Railroad Officials Optimistic As to Business Outlook

Special dispatches to the Manufacturers Record from the presidents of a number of the leading railroads of the South indicate that from the railroad point of view the situation in this section shows decided improvement and that officials are looking forward to a steady increase in business.

The railroads of the South have probably been the worst sufferers among all the business interests of that section, by reason of the fact that the depression in every line of industry and agriculture was concentrated in the aggregate in the railroads. The difficulties of the lumber people, of the iron people, of the cotton farmers, of the merchants and all others were all united to make far greater difficulties for the railroads. It is, therefore, especially noteworthy that the railroads are already beginning to get the benefit of the rising tide of business. Railroad officials, who have been carrying the heavy burden of operating their lines without lessening their facilities, during the time of heavy decrease in revenues, are beginning to see daylight, and through these special dispatches to the Manufacturers Record give voice to their optimistic views as to the outlook.

PRESIDENT HARRISON OF SOUTHERN RAILWAY SEES GENERAL BETTERMENT.

[Special Dispatch to Manufacturers Record.]

Washington, D. C., September 28.

Business conditions throughout the South are very much better than last year, and prospects for further improvement rest on the sound basis of a profitable price for cotton and unprecedentedly large production of grains and forage crops, substantial progress in the development of the livestock industry and a good demand for most kinds of manufactured products.

The outlook is particularly good for the Southern farmers. While the total yield of cotton is much less than that of last year, the cost of producing this year's crop has been far below that of any recent year. At current prices the profit to the farmer on a bale of cotton is probably greater than in some years when the price per pound has been higher, and he will spend very little money this year for grain, hay and other supplies to be shipped into the South from other localities. A large proportion of last year's cotton crop is still in the South, much of it in the hands of farmers, so that we may expect that the amount of money disbursed for cotton in the South this year will be much greater than if only the present year's production had to be moved.

With fundamental conditions sound and with indications of a broadening of business of all kinds throughout the United States, I think we have every reason to anticipate a prosperous year in the South.

FAIRFAX HARRISON,
President Southern Railway Co.

ENTIRE SOUTHWEST PREPARING FOR SEASON OF PROSPERITY.

[Special Dispatch to Manufacturers Record.]

Chicago, Ill., September 28.

Information from representatives in 14 States served by the Rock Island lines indicates a strong upturn in business conditions, due to good crops and good prices being received for all grains and feeds. The entire Southwest is preparing for a season of business prosperity based on agricultural production and the great demand for foodstuffs in this country and abroad.

L. M. ALLEN,
Passenger Traffic Manager Rock Island Lines.

IMPROVEMENT VERY NOTICEABLE AND PRONOUNCED.

[Special Dispatch to Manufacturers Record.]

Wilmington, Del., September 29.

The situation looks much brighter in our territory, as evidenced by increased business. People generally seem more optimistic. This situation is very noticeable and pronounced.

W. J. HARAHAN,
President Seaboard Air Line Railway.

THE OUTLOOK IN FLORIDA IS EXTREMELY BRIGHT.

[Special Dispatch to Manufacturers Record.]

St. Augustine, Fla., September 28.

The business outlook is brighter for Florida than any other State in the South, because of the greater diversification of products raised in Florida. In addition to citrus fruits, Irish potatoes, hay and grain, as well as cotton and tobacco, a very important industry is now rapidly developing in the breeding of high-grade cattle, hogs and sheep. The outlook for the citrus industry for this season is extremely good. Western cattlemen are locating in Florida, and there are strong indications of a heavy movement of Lomeseckers this season. Looking at it in every light, the present outlook for Florida is extremely bright, and the season's business is very promising.

J. E. INGRAHAM, Vice-President
Florida East Coast Railway.

BUSINESS OUTLOOK IMPROVING DAILY.

[Special Dispatch to Manufacturers Record.]

Roanoke, Va., September 28.

I believe the business outlook in the South is improving daily. Conditions of business as shown by gross earnings of railroads have been bad, owing principally to depression in prices of cotton, lumber, coal and iron, but cotton is now bringing good prices, and demand for lumber, coal and iron is more active. With a fair cotton crop and a large grain crop assured and good prices in prospect general business will take on new life. I believe, however, that the future of the South depends largely upon greater attention being given to diversified crops and improvements to highways.

L. E. JOHNSON,
President Norfolk & Western Railroad Co.

INCREASED CONFIDENCE IN MANUFACTURING AND COMMERCIAL CIRCLES.

[Special Dispatch to Manufacturers Record.]

Houston, Tex., September 28.

General business conditions in Texas are much better than at this time last year, notwithstanding a heavy decrease in the cotton crop. Good grain crops, with cotton around 12 cents and corresponding increase in by-products, have inspired confidence in manufacturing and commercial circles, and we look for conditions to continue to improve during the fall months.

W. B. SCOTT, President,
Sunset-Central Lines, Houston, Tex.

AN ERA OF PROSPERITY INAUGURATED IN THE SOUTHWEST.

[Special Dispatch to Manufacturers Record.]

New Orleans, La., September 28.

Reports from Texas Pacific traffic representatives and agents from New Orleans to El Paso indicate that while

the cotton crop is approximately 25 per cent. under last year, the better price will more than counteract the influence of this shortage. This, together with the great increase in the grain and feed crop, is inaugurating an era of considerable prosperity. The market and movement of lumber is improving, farmers are in a prosperous condition, merchants are ordering more liberally, so that the outlook for the future in the territory our line serves is considerably brighter.

N. M. LEACH,
Gen. Traffic Manager Texas Pacific Railway Co.

CONVINCED THAT WE HAVE TURNED THE CORNER.

[Special Dispatch to Manufacturers Record.]

New York, N. Y., September 28

There is every indication that the increase in earnings on the railroads operating through Virginia and North Carolina is the result of a permanent return to normal conditions. This is supported by the fact that practically every commodity handled by railroads is moving in increased quantities. From a careful survey of the situation on our lines during the last week I am convinced that we have turned the corner, and that business has finally adjusted itself to the new conditions brought about by European disturbances.

JOSEPH H. YOUNG,
Pres. and Gen. Mgr. Norfolk & Southern Railroad.

REVENUES INCREASING AND OUTLOOK OPTIMISTIC.

[Special Dispatch to Manufacturers Record.]

Nashville, Tenn., September 28.

Our operating revenues for August were about 5 per cent. less than same month, 1914, and 12 per cent. less than 1913. Great improvement, however, has taken place since January and February of this year, and I am optimistic as to immediate future.

JOHN HOWE PEYTON, President,
Nashville, Chattanooga & St. Louis Railway.

EVERYTHING POINTS TO PROSPEROUS DEVELOPMENT.

[Special Dispatch to Manufacturers Record.]

New York, N. Y., September 29.

Our line is enjoying improving conditions. Everything points to a steady, wholesome and prosperous development throughout the South.

MARK W. POTTER, President
Carolina, Clinchfield & Ohio Railway.

STEADY IMPROVEMENT HAS BEGUN.

Henry Walters, chairman of the board, Atlantic Coast Line Railroad Co., in a recent interview said:

"The South, after a year of the strictest economy, has, in my opinion, seen the worst of its trials and a reasonably steady improvement has begun."

Evidently Reaches Them All.

F. M. RUNNELS, Secretary Reidsville Commercial and Agricultural Association, Reidsville, N. C.

Some days since I sent you a three-line memo. that the property-owners of Main street were to hold a meeting to discuss the paving of that thoroughfare. We have been literally swamped with inquiries, and Mayor Cummings is asking for help in his correspondence.

We find it will take an enabling act before further progress is made. Will you please advise paving concerns, contractors, engineers, consulting and otherwise, quarrymen, manufacturers of crushers, wheelbarrows, scrapers, mixing machines and allied interests. The MANUFACTURERS RECORD evidently reaches them all.

Million-Dollar Depot to Supplant an Out-of-Date Structure of 1855

[Special Correspondence Manufacturers Record.]

Macon, Ga., September 24.

The last legal obstacle to overcome in erecting the proposed union station in Macon was brushed away today when the Georgia Railroad Commission at Atlanta formally approved the plans for the million-dollar building that will be erected here by the Macon Terminal Co. from plans drawn by Alfred Fellheimer, 7 42d street, New York city, an architect who makes a specialty of station plans, and bids for erecting the structure will be called for within the next 10 days. Thus has the plan to give Macon a modern railway passenger terminal been formally launched, and it is expected the completed building will materialize not later than January 1, 1917.

In approving the Macon terminal plans the Railroad Commission, of which C. Murphy Candler is the chairman, acted also for the City Council of Macon, as Mayor Bridges Smith, in response to an invitation extended by the commission to the Mayor and Council to be present at the sitting today, declined, stating in a letter to Chairman Candler that he was confident the commission would look after the interests of the city of Macon as well as those of the State. The movement for new depots was started some two years ago, when the Railroad Commission ordered all the railroads entering Macon to build new stations. The result, after two years of negotiations between the State and city officials and the railroads, was the formation of the Macon Terminal Co. This company, composed of the officials of the three leading railroads that will use the new station, issued bonds, and is now ready to see the actual work begin. The officers of the Macon Terminal Co. are W. A. Winburn, Savannah, president; H. B. Spencer, Washington, vice-president; E. V. Cuen, Savannah, secretary, and C. K. Lawrence, Savannah, chief engineer.

The Union Station, as it will be called, will cover about 10 acres of ground, including the trackage and concourses, extending in length from Plum to Walnut street, and in width from 5th to 6th street, with the main entrance at the foot of Cherry street, Macon's leading business thoroughfare, utilizing in all four city blocks. The location of the proposed new station is very convenient, the main entrance being situated at the foot of the leading business street, which is only a few squares from the center of the city. To make way for the new depot the very heart of the present wholesale district will have to be torn out, and work will begin at once to clear the site. A subway, through which Poplar street will be extended, will be erected. It will be faced with white enamel brick and constructed of concrete.

The general scheme for the construction of the terminal includes a main structure which will be 213 feet long by 85 feet wide and three stories high, in addition to an adjoining baggage and mail room, 57x112 feet, to the right as the passenger comes in from the main entrance, and the express building, 57x134 feet, to the left. This main building and adjoining ones will be erected of brick or similar fireproof materials. The exterior of the station will have a granite base course, the superstructure walls to be faced with terra-cotta or granite texture or gray brick with terra-cotta or limestone trimmings.

Arrangements have been made in the main building for the usual ticket offices, news stands, telephones and telegraph stations, restaurants for both white and black and separate waiting-rooms for both races. These will all be practically on a level with the street.

Alongside the main and adjacent building there will be constructed an open covered concourse, to provide connection with the main concourse, which is to run at right angles from the building. This main concourse, which will be 34 feet wide and extending the whole width of the railroad yard, will be under the tracks. It will be paved and lighted, and ample seating capacity will be provided. Short stairways, enclosed with glass sash and doors at the bottom, will be used between the main concourse and the platforms above, serving the various tracks.

In the railroad yard there will be 18 tracks for the

present, while space for 20 tracks has been designated, which will run with the buildings. This will eliminate the unnecessary backing in and out of the station, as all trains will go right on through without changing their course. Serving the tracks will be nine concrete platforms, covered with metal truss butterfly canopies, which will afford protection from the elements.

Macon is sorely in need of the facilities that will be afforded by the new station. At present the Central of Georgia Railroad, the Georgia Southern & Florida Railroad, the Georgia Railroad and the Macon & Birmingham Railroad are using the present Union Station. This station was originally built in 1855 at a cost of \$100,000, and rebuilt in 1893. It is wholly inadequate, as there are 10 tracks entering the station and only four of them are under cover. In addition the station shed is much too short for the average "special" that travels the South in the winter time. The Southern Railway and the Macon, Dublin & Savannah Railroad have even more inadequate passenger facilities. It is a wooden structure, and has accommodations about equal to those of a town of 5000 people. All of these deficiencies will be eliminated in the new depot.

Mayor Bridges Smith in an interview for the MANUFACTURERS RECORD said in speaking of the proposed new passenger receiving plant:

"We people of Macon have long realized the need of new facilities for handling our visitors and our home folks and in approving the plans, as it did today, the Georgia Railroad Commission has not only looked after the most important interest Macon is now nursing, but has removed all obstacles in the way of its immediate construction. When the station is completed it will give Macon, I think, absolutely the finest and most modern station south of Washington. By general increase and annexation Macon increased its population during the decade ending 1910 about 74 per cent. The new station will be in keeping with the general advancement of the city."

Chairman Candler is also very enthusiastic over the new terminal for Macon. He thinks it will be the finest to be erected so far in the South, eliminating Washington, of course.

It is estimated that the building will cost approximately \$650,000, which, added to the real estate on which it will stand, will make total of \$1,100,000.

In the wheel of Georgia the railroads form the spokes and Macon the hub city. Therefore, upon completion of the new terminal the "spokes" will fit into a most magnificent "hub."

ROY G. BOOKER.

PROSPERITY IN OKLAHOMA.

High Wages in the Oil Fields Makes Brisk Business in the Cities.

Pemeta, Okla., September 25.—[Special].—The big wage scale in the oil field district of Oklahoma gives this section a degree of business activity greater than most other sections enjoy at this time. Prosperity is prevalent, based on the big payrolls. In all departments of oil production the men are well paid, and as more men are gradually becoming experienced in the work the wage scale is said to be on the upgrade. Quick results are desired, experienced men are necessary in all lines, and the big producing companies, which dictate the prices on oil field labor, are willing to pay the top-notch wage.

This fact was demonstrated recently when a complaint was made by one of the large railroad systems of the State that it was difficult to get men and teams for railroad construction across the oil field because of the higher prices paid by the oil companies. At that time there were many big steel storage tanks being built, a work that calls for many men and many teams, and the wage scale was far better than that tendered by the road builders. It is good wages that hold men in oil field work during an entire lifetime, preferring it to any other. The oil field workman, as a rule, is a good spender as well as a good wage-earner, and it is that

fact that makes the oil field town and the oil field district a good financial center.

The population of this immediate oil field district has been several times estimated at 50,000 persons, of which the big per cent. are wage-earners. Thousands of them live in the field, making their homes in tents and cabins. Many of the workmen congregate in field communities, living bachelor lives, while hundreds of others bring their families close to their work.

Chief among the oil field workers are the drillers and tool dressers, with the former making \$7 a day and the latter \$6. There are two towers a day, the drilling, as a rule, continuing night and day, and the money paid to the drillers and tool dressers for one day's drilling on one well amounts therefore to \$26. At the present time there are said to be 100 strings of tools running in this field, or a payroll of \$2600 a day for drilling alone. Frequently, too, the oil companies furnish living places for the men, and this is true in many instances in all lines of oil field work.

The farm bosses draw from \$175 to \$200 a month in the oil field, the field superintendents get \$175, the pipe line gaugers \$140 and the scouts \$150.

The teamsters or "skinners" draw \$2.50 a day, while \$6 is allowed for a team, and a pipe line layer gets \$3. The "tankies" and "bucksups," the men who build the steel tanks, draw down anywhere from \$5 to \$7 a day, and the rig builders also made from \$5 to \$7. Ditchers get \$2.50.

The pumper, considered the laziest job in the field, gets \$90 a month, the engineers from \$100 to \$125, and the roustabout from \$80 to \$100.

Pipe line connection foremen draw \$150 a month and expenses, and pipe line district foremen anywhere from \$175 to \$200. Tank strappers get \$150 and expenses.

The members of the casing crews, and there are many of these also, get from \$5 to \$10 a day, while an oil field shooter, the fellow who handles the nitroglycerine, draws \$150 a month. A telephone man in the field is paid \$3 a day.

The cleaning-out men are well paid, the driller drawing \$125 a month and his helper \$90, and an oil switcher on a lease draws \$80. Gaugers for independent companies are paid \$125.

Frequently the oil companies maintain an office force in the field, and the clerks employed get anywhere from \$80 to \$100 a month, while a checker at a toolhouse draws \$80.

The old field workmen, as a rule, have been in other fields prior to coming to Oklahoma, and the majority of them have seen service in the fields of Pennsylvania, Indiana, Ohio and Illinois, while others include California and Texas in their itineraries. Their knowledge of all other fields is broad, as a rule, and their store of information is valuable.

To give some idea of the payrolls of the big producing companies in this oil field, it is understood that the Carter Oil Co. and the McMan Oil Co. each employ in the neighborhood of 250 men practically all the time. The Prairie Oil & Gas Co. perhaps employs a like number in this field, while C. B. Shaffer, B. B. Jones and the Silurian Oil Co. will not run far behind. The payrolls of each of these six producing companies will total approximately \$1000 a day.

Gradually, too, the scope of oil field work is being widened through the location of refining plants, casing-head gasoline plants, oil-treating plants and other side lines of the oil industry. The first refining plant, actually within the field, has just been completed at Pemeta, and is now in operation, and deals are pending for the establishment of other such plants in various oil field towns. In addition there are eight refining plants at Cushing, two at Yale and one is just being started at Jennings.

The oil field payroll has been increased, for the present, through the construction of a good-roads system, a total of \$102,500 being expended, money voted by Tiger township for good roads and bridges.

C. M. SARCHET.

Horn Machinery and Looms.

Saiamy & David, manufacturers' agents for South America, Egypt and Near East, 40 Wall street, New York:

"We are interested in machinery for manufacture of horn combs; also in silk piece goods looms and silk ribbon looms."

Advancing Iron Market and Heavy Sales

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., September 27.

Those who have followed closely the trend of the pig-iron market for the past three months have been impressed with the fact that today marks the highest prices recorded for the past two years, viz.: \$12 per ton at the furnace for shipment the balance of this year, and \$12.50 per ton through the first half of 1916.

To the furnace interests of the Birmingham district these prices come as a special boon, for they have waited long and patiently for even an average figure that would put them in the neighborhood of cost. Many of the interests preferred to stock the bulk of their make, and this policy was indulged in to such an extent that six or seven months ago there were stocks on hand in the district to the extent of practically 500,000 tons. Today 250,000 tons will cover stocks on hand, and they are being reduced still further at the rate of 30,000 tons per month. Many idle stacks have been blown in, yet stocks are drawn on in addition to current make. One big interest has practically withdrawn from the market and raised its price to \$13.50 per ton as the furnace.

Of course, this is an arbitrary figure, yet the position taken rather reflects the judgment of officials in charge as to the trend of the market. One well-informed pig-iron producer ventured the opinion that within the next three months the trade would be up against a \$13.50 market. Already buyers are manifesting a feeling of unrest, and numerous submissions of tonnages by buyers are being received at the offices of sellers representing a figure that would have been very attractive to the seller 30 days ago.

There has been an advance of \$2 per ton on finished steel products. The Louisville & Nashville Railroad has purchased 43,000 tons of rails, the Atlantic Coast Line 20,000 tons and the Southern Railway is reported to be in the market for 20,000 tons, as are also other Southern roads.

Any activity in steel, of course, reflects its influence on the pig-iron market; therefore, with prospects of increased activity in steel products for the manufacture of munitions and for the gradual growing demands of American users along other lines, cannot but further stimulate pig-iron to the material advantage of merchant producers.

Since the first of the year cast-iron pipe has experienced an advance of \$3 per ton; and, while the pipe business has not shown any great activity at the advance, one of the large producers and handlers of this product stated that in the main conditions were satisfactory. With the assured excellent crop conditions in the West and Southwest, it is reasonable to suppose that the prospects of building and municipal work in those sections will have shown up so favorably as to warrant an optimistic view by the pipe interests.

Some mention has been made of a proposed merger by the Bethlehem Steel Co. of three of the large independent iron companies and one steel interest. An official of the latter interest, when questioned, replied that he had just returned from the East, and his only information about such a deal was gained by noting local newspaper items. He stated that his concern was running along in a very satisfactory way and placing its products in legitimate channels; and strictly from the earnings of the company was making improvements at the plant, by bettering its equipment (looking to better efficiency and lowering costs), by expending at the rate of \$20,000 to \$30,000 per month. He also stated that about 86 per cent. of the work on putting down slope to reach the large deposit of red ore in Rhodes Valley had been completed, and that prospects of reaching the ore in March next year were good.

The domestic coal trade has been very brisk, the October 1 advance of 15 cents per ton in rate to Gulf Coast points having stimulated the stocking plan. However, this advance has had the opposite effect on steam coal trade, many of the large consumers in that territory preferring to use oil at 60 cents to 65 cents per barrel. In order to overcome this advance of 15 cents per ton the coal interests of the district have vigorously turned their attention to barging of coal down the Warrior River to Mobile and across Mississippi Sound through the Lake Barque Canal to New Orleans. The

two large coal-producing interests are now utilizing this transportation, one to the extent of 10,000 tons per month to New Orleans and the other several thousand tons per month to Mobile.

Southern coke has taken a 25-cent to 50-cent per ton advance within the past month, in keeping with the advance in price of Northern cokes and increased furnace demands.

The business men of Birmingham have taken a decidedly optimistic view of general conditions, and that spirit is felt in all lines of trade. Y. A. DYER.

OPERATING A MODERN ICE PLANT.

How the Cost of Production Is Cut by the Installation of Up-to-Date Equipment.

The plate-ice plant of the Knickerbocker Ice Co. of Baltimore, just rehabilitated at a cost of about \$125,000, possesses mechanical features that, combined with scientifically economical arrangement and operation, make it of value for the study of those interested in the production of pure ice at a low figure.

The factory is 330x160 feet, and 40 feet high. Its capacity is 200 tons a day. The storage-house is 100 feet square, and averages 54 feet in height.

Power is obtained from producer gas engines. The fuel used is No. 1 buckwheat coal, fed from a roof bin to the three gas producers of 300 horse-power each, which furnish gas for the engines. These producers are of the suction type manufactured by the Smith Gas Power Co. of Lexington, O. They are arranged in the relative positions of three corners of a square, the fourth corner being vacant, thus affording space for the addition of another producer when needed. The gas is cleaned by water scrubbing before it is fed to engines. The production of gas is automatically controlled in accord with the speed of whatever number of engines may be in operation, and hence fuel waste is obviated while the maximum of required power is sustained.

The ice machine room is equipped with two 100-ton-a-day machines of the duplex type, composed of two independent units, so that the plant can be run with a daily output of 50 tons of ice or any multiple thereof up to 200. These machines were manufactured by the Vilter Manufacturing Co. of Milwaukee, Wis. Two 325 horse-power three-cylinder gas engines, manufactured by the Rathbun-Jones Engineering Co. of Toledo, O., drive the ice machines. Power from the engines to the ice machines is transmitted by Velox balata belts, from the Manheim Manufacturing & Belting Co., Manheim, Pa. The belts are 44 inches wide, 90 feet long, on a center of 36 feet. Two smaller belts are used for driving two generators of 55 kilowatts each, one a Sprague and one a Fort Wayne. The generators furnish current to all motors used in the plant. The motors are General Electric.

The equipment of the engine-room occupies about two-thirds of its floor space. An ice machine similar to those now in operation can be installed without disturbing the others. The gas producers have a combined horse-power of 900. With addition of one more the producers' horse-power would be brought up to 1200. The addition of another 100-ton machine, with the necessary 325 horse-power gas engine furnishing motive power, would make the engine-room horse-power 975, or 225 less than the power of gas produced. The difference forms a safe margin for emergency and allows the producers to be operated at a low rate.

The freezing-room is 100x150 feet. It contains 40 tanks in 4 rows of 10 each. Each tank freezes 8 plates 10x10 feet by 14 inches thick, making a total of 320 plates. The time of freezing is one week. City water is used, twice filtered before entering the tanks.

Ammonia coils are of a special design, the patent for which is held by the company. They were made by the Harrisburg Pipe & Pipebending Co., Harrisburg, Pa., of one inch continuous wrought-iron coil. The thawing off system is such as is generally used in plate plants of large capacity.

Overhead electric cranes of 4 tons capacity, with

tread of 23 feet, are used for lifting the plates from the tanks and conveying them to the saw tables.

Making one gallon of water do the work of 10 where used simply for mechanical purposes is one important economy. There is used for such purposes about 1400 to 1500 gallons a minute. Of this, only about 125 to 150 gallons is lost, the remainder being used over and over again, only the amount lost being taken fresh to keep the supply up. Of the water used, 1200 gallons a minute is for the condenser. Formerly the water ran off the condenser coils into a waste pipe. There has been installed under the condenser a pan that catches the water which is pumped to the roof and thrown into the air as fine spray, being cooled about 25 degrees, with a loss by evaporation of only about 50 gallons a minute. It is then run by a gravity line back through the same pipes, over the condenser coils, and so on indefinitely. The piping is connected with a city main, so that just enough is run in from the main to make up for the loss by evaporation. According to Mr. George Miller, the president, "not a drop of water gets by this plant." Five pumps, manufactured by the Keystone Driller Co., Beaver Falls, Pa., ranging in capacity from 50 to 1200 gallons a minute, are used.

Cork insulation for the storage-house was furnished by John R. Livezey, 5 Commerce street, Baltimore. Special attention was given the matter of absorption of moisture. The ceiling is made of one thickness of dressed boards. At intervals of about 10 feet there are open spaces six inches wide. When there is any likelihood of trouble from the condensation of moisture from the air these spaces will be stuffed with sea grass to absorb it. There is an air space of three feet between the ceiling and roof. A good air circulation is secured by air vents under the eaves. A storage capacity of 12,000 tons is provided to tend toward equalizing winter and summer production and for holding a reserve stock for emergencies.

Instead of eight tons of ice to a ton of coal used, as formerly, the plant is now producing 25 tons to a ton of coal, and is expected to reach the 30-ton mark when all improvements are in full operation. The capacity working year has been lengthened nearly two months. The ability to handle business has been increased an estimated proportion of 33 1/4 per cent.

American Locomotive Report.

The American Locomotive Co.'s report for its fiscal year ended June 30, 1915, shows gross earnings \$9,303,298.23, decrease as compared with the previous year \$20,684,140.02; manufacturing, maintenance and administrative expenses and depreciation \$10,445,900.13, decrease \$16,979,286.52; net earnings (deficit) \$1,142,601.90, decrease from 1914 (when there was a net profit) \$3,704,853.50; net loss after interest on bonds of constituent companies, coupon notes, etc., \$1,491,980.43, decrease as compared with the net profit of 1914 \$3,568,107.88.

S. L. Schoonmaker, chairman of the board, says that at no time during the 14 years of its existence has the company suffered so severe a depression in its business. There was a further retrenchment in expenses, and the salaries of all executive officers and salaried employees were reduced. Work upon the few orders received was concentrated at the Schenectady works, so that other plants could be closed. It and the Cooke plant were the only plants working for the whole year out of the eight owned. Production averaged about 17 per cent. of capacity, but at times ran as low as 8 per cent.

The balance-sheet shows total assets of \$80,872,228.30, of which \$52,209,638.16 represents the cost of property; convertible assets are \$27,704,925.36, of which latter \$15,400,479.18 represents cash assets.

Jacksonville's New Compress and Warehouse on Bonds Facilities.

Contracts have been awarded for the buildings and machinery of the compress and warehouse recently planned by the Port Commissioners, F. W. Bruce, chief engineer, Jacksonville, Fla. The building will be 420 feet long by 97 feet wide, of concrete, costing \$31,000, the contract having been awarded to the Hillyer & Sperring Company of Jacksonville. There will be installed a standard high density compress and a Morse press costing \$50,000, with daily capacity 1500 bales of cotton.

Displacing Cotton With Corn and Forage Crops on Cut-Over Lands in the Yazoo Delta

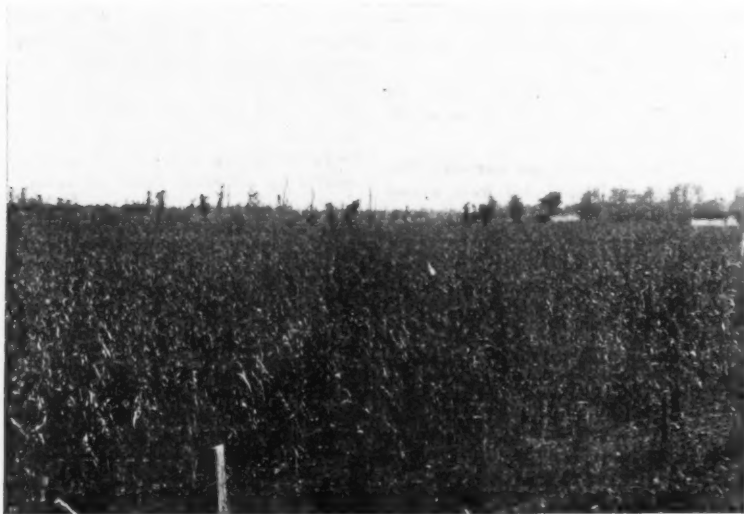
Mr. George Land, traffic manager of the Lamb-Fish Lumber Co., Charleston, Miss., in sending the facts given in the following article, writes:

"We have read with interest the article by Mr. E. E. Miller with reference to the 'Making of a New Corn Belt.' As this company for the past three years has made various experiments with the soil of its cut-over lands, possibly the attached story will be of some interest to you.

"We have had some excellent photographs made of half a section planted solidly in corn, and from which our plantation manager estimates that we will receive on an average of 100 bushels per acre. We have, all told, 2300 acres planted in corn this year. No fertilizer was used whatever. Stalks, it will be observed, are from 12 to 14 feet high and average two full developed ears to the stalk. Prospects are that we will realize greater net returns from our plantation operations this season, upon which not one single stalk of cotton has been planted, than we did last year when almost the entire tract was covered with cotton."

Hardwood timber has furnished one of the main sources of income to the State of Mississippi for half a century. Timber adjacent to the streams and railroads during this period has been removed, and the fertile lands placed under cultivation. There still remains an enormous acreage yet untouched, but a great portion is

harvested after the army worm and boll-weevil invasion. To a farmer compelled to use commercial fertilizers this statement may be hard to comprehend, but nevertheless it is absolutely correct. Last summer a year ago on our South Lake farm cotton stalks planted in rows five feet apart made a field so thick that it was



THE GROWING CORN.

difficult to operate, being too far removed from transportation, while but few large tracts are owned by any single interest.

The Lamb-Fish Lumber Co. of Charleston, Miss., is the owner of a tract of 74,000 acres. Records do not indicate that there is to be found anywhere else in the Yazoo Delta any single tract as large as this or as well located. Inasmuch as the soil is so well adapted for farming purposes and acreage too valuable to permit of forest conservation, commercial requirements have made necessary removal of this timber. The company has already cut over other properties aggregating 28,000 acres, but the cream of its holdings has been kept intact up until the last few months.

As the Lamb-Fish Lumber Co. has cut over its timber holdings in the Yazoo Delta it has placed a small part of these cut-over lands under cultivation. The company has something like 28,000 acres of cut-over lands, but so far have cleared only about 3000 acres for agricultural purposes. For the past three years a tract of 100 acres has been under control of a graduate of Mississippi Agricultural and Mechanical College. Experiments of various kinds have been conducted. The result of these investigations proved that Delta soil was adaptable to almost any demand that might be made upon it by plant life. Inoculation was needed to make alfalfa profitable, but no fertilizer or other substance could in any way improve the soil for the production of cotton, cereals or vegetables.

A large part of this plantation was placed in cotton in 1914, and although army worms came in millions, stripping the cotton stalk of every vestige of foliage, and, in turn, were followed by the boll-weevil, destroying the entire top crop, so far as this section was concerned, instead of being a plague, they were a blessing. An average of almost a bale per acre of extra length staple

have planted cotton in 1915, even if the cotton market had suffered no ill-effects from the European war. Experiments previously made on the 100-acre tract had proved that the black soil, composed of decayed vegetation deposited for ages, with a depth of from 10 to 20 feet, and blessed with a climate and rainfall that made possible full utilization of every advantage, was as well adapted to the raising of other crops peculiar to this country as cotton. It had been developed that a corn production of 100 bushels to the acre without the use of fertilizers of any description in a seasonable year was not the exception, but rather the rule. The cost of production and harvesting of corn was nothing to compare with expenses incident to cotton. Exact accounts were kept with all products of this farm. The net realization from corn far exceeded that of cotton. Oats, wheat, alfalfa, rye and barley, while not producing the gross value of cotton, created a greater net.

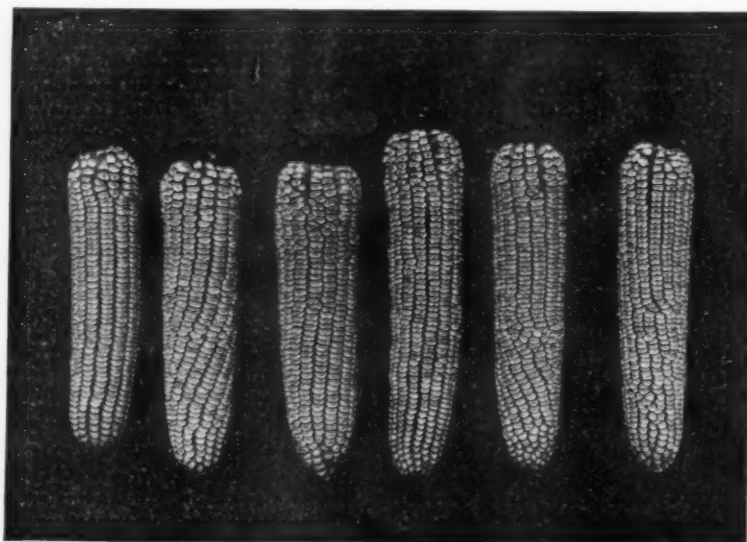
Reports of the manager in charge of experiment station for the year 1914 show that on seven acres planted in corn there was a total yield of 800½ bushels, or 116 bushels per acre. The cost of production per acre (including cost of seed, preparation of seed bed and all cultivation) was \$5.67; cost of production per bushel, 4.88 cents. The rows were five feet wide, and the crop went six weeks without rain, a most unusual occurrence. If seasons had been favorable and the rows three and one-half feet instead of five, the yield should have been at least a third more. No fertilizer of any kind was used.

Millet grows luxuriantly on this soil. It makes an enormous yield, and if cut at the proper time will make an excellent hay. It should be cut three times during the season.

Two acres of alfalfa were planted early in October and thoroughly inoculated. It is a perfect stand from side to side, and is as pretty as can be seen. By thorough surface draining, proper inoculation and the addition of lime in places this land would grow from four to six tons of alfalfa per acre.

One-third of an acre was planted in ribbon cane this year. Notwithstanding that it was planted on the poorest part of the field and no fertilizer used, it grew to a height of seven feet eight inches. Average molasses cane, which is 4½ feet, will make two gallons of molasses per 100 stalks. This third of an acre would have made 220 gallons, or 660 gallons per acre, had the cane been only 4½, but this would average six feet; therefore the yield should have been fully a third greater, or 880 gallons per acre.

Irish potatoes do well here both in the spring and the fall, provided the land is well drained. Two hundred bushels per acre have been made in 12 months. The fall crop should be harvested and housed the same way as the spring, and in addition should not be allowed to freeze. We have had no trouble in keeping them 12 months in the year. If stored away to meet the high-price market, which most invariably comes in July and



SAMPLES OF CORN PRODUCED.

January, February and March, the potato would be an exceedingly profitable crop.

Turnips will thrive as well here as in any part of the country. We have grown them to weigh nine pounds. In addition to their use as a table vegetable, they have a feeding value for cattle, and should be grown on every farm.

"Summing up or reviewing my experiences here," the manager concludes, "I have come to the conclusion that the wisest, safest and most profitable plan for farming in this section since cotton has been eliminated would be to combine hogs, cattle, corn, hay and potatoes. This system would increase instead of lower the fertility of the soil by rotating and using legumes for hay, and afford a source of income for several seasons of the year."

Pictures enclosed, taken on the 10th of September,



CORN 12 TO 14 FEET HIGH.

show stalks of corn taken from a uniform field of 320 acres, and are typical. Their height ranges from 12 to 14 feet. As many as eight ears are fruited from one stalk. The usual yield per stalk is two full developed ears. Ears taken from average stalks range from 8½ to 10½ inches in length and from 6½ to 8 inches in circumference at base, containing from 800 to 1000 grains grading No. 2 white. Cobs are small in diameter, straight and filled with 16, 18 and 20 even-running rows of long grain. Moisture content cannot, of course, yet be determined, but an analysis of last year's products, made 30 days after harvesting, resulted in the finding of an unusually firm grain, richer in protein, fat and carbohydrates than ordinarily found in the Northern grain. Further, in the spring and summer no loss has so far been occasioned by weevils.

The results obtained so far from diversification have proved so satisfactory that it is doubtful whether this farm, now consisting of 3000 acres, to which acreage is being added annually, will ever raise another staff of cotton. Having some 25,000 acres yet to clear, which is ideal for stock raising, and which can be covered with legumes at a slight expense, the future holds greater possibilities in this direction than the manufacture of lumber.

In this connection it might be well to direct attention to a custom that has for a long while prevailed regarding the manner in which livestock are taken care of during the off seasons. Both logging and farm animals when idle are turned loose, regardless of the season, to graze on these cut-over lands, and when ready to resume work there is no material difference in their weight, even after months of grazing, receiving no feed other than that to be found in the grasses and brakes. Such animals need little preparation for hard work, and suffer no ill-effects in changing from grasses to corn, oats, hay and fodder.

It can be safely said that a full realization of the possibilities of the Yazoo Delta has never dawned upon

the mind of anyone. Our native planters have no idea of the toil and patience demanded of the upland farmers, in order to eke out a meagre existence. Nowhere else in the country is the American eagle valued less from a monetary standpoint than in this section. The great puzzle to one familiar with production in other territories and the costs of raising farm products, where costs of commercial fertilizers exceed total costs of raising and harvesting in the Delta, is the comparatively low prices of farming lands. Possibly it is due to the supposed abundance and slight knowledge of Delta conditions by outsiders. However, it is safe to predict that the wonderful soil, climate and well-balanced rainfall here will attract homeseekers in sufficient quantities in the near future to make the Yazoo Delta the most populous and profitable agricultural section in the States.

TODAY.

A Western Miner Talks.

Author Unknown.

[From Bulletin American Iron and Steel Association.]

Old Yesterday hain't no more use
Than rubber boots is to a goose;
So saddle up and ride away
From that there wuthless Yesterday.

Hook your spurs in the broncho Hope
And hit a high and swinging lope
Across the Range of Things That Are;
Leave that old past so blessed far
Behind that you can't even view
It thru a glass if you try to.

Your failures? Shucks! forgit 'em all;
Don't let 'em know you hear 'em call.
Look up and see the rainbow smile;
Today's the only time wuth while.

To worry is to show your hand
To every fellow in the land;
To worry is to let folks know
You think you hain't a fighting show.

You can't win fame or even pelf
Unless you sort o' bluff yourself
Into believin' that you be
Plumb failure-proof; and then, by Gee,
You want to size things up correct,
Just as they be, and don't select
A pile of dirt where gophers sit
And make a mountain out of it.

And don't forgit the sayin's true,
There's millions far worse off than you.

Many Georgia Interests to Jointly Meet at Macon.

Atlanta, Ga., September 23.—[Special].—The second annual meeting of the Georgia Chamber of Commerce, which is to be held at Macon September 29 and 30, is enlisting so much interest throughout the State that a record-breaking attendance is looked for.

Special features are expected to draw thousands from all parts of the State who would not ordinarily attend a regular meeting of the Georgia Chamber of Commerce.

Mayor Bridges Smith has called a meeting of the mayors of all the towns in Georgia to confer with him at Macon after they have witnessed a run of the Georgia motion picture films, in order that they may decide on details looking to the perfecting of the film and having the proper representation of all Georgia towns in the film.

A good-roads conference will be held to consider the establishment of 12 auto highways from the border

lines of the State to Macon as the point of convergence. It is estimated that not less than 1000 automobiles will come from various parts of Georgia over proposed routes, carrying delegations to present the claims of their respective routes for selection as Georgia State highways. The routes selected will be taken under the supervision of the Georgia Chamber of Commerce, which will see to the sign-posting of the routes, will issue a route-book and undertake to see that they are kept in good condition by the local authorities until such time as the Legislature establishes a State highway commission, to which they will then be turned over.

The Georgia Harvest Festival Association, which will hold the Georgia Harvest Festival in Atlanta November 15 to 20, has called a meeting of their county advisory board, consisting of seven men from every county in Georgia, to meet in Macon at the same time.

Last, but by no means least, is the second "Seeing Georgia" tour. On the invitation of the people of North Georgia, hundreds of South Georgians will assemble at Macon on the morning of the 29th, attend the annual meeting, view the Georgia motion picture film, take a hand in formulating plans for a comprehensive campaign to advertise Georgia's resources and development throughout the nation, and on the afternoon of the 30th, at the close of the annual meeting and its features, the tourists will start on the trip through Middle and North Georgia, traversing the most beautiful and interesting portions of those sections.

Constructing Forrest Highway.

Work is proceeding steadily and rapidly on the construction of a modern roadway to extend from Rome, Ga., to Birmingham, Ala., to be known as the Forrest Highway. While this highway at present is not national in its scope, it forms an important connecting link with the Dixie Highway at Rome, and will also join the Jackson Highway at Birmingham if the proposed route of that highway goes through that city.

From its present terminus of Rome on the north, the highway passes through the counties of Floyd, Georgia; Cherokee, Etowah, St. Clair and Jefferson, Alabama, a distance of 121 miles.

The construction of the roadway has met with enthusiastic support among the citizens along the entire route, and one of the striking features of the undertaking has been the personal time and labor they have given to the project.

This is particularly illustrated in Cherokee county, where, owing to lack of funds for road work, 200 volunteer workers in this county have devoted their time and labor to constructing their section of the Forrest Highway.

The work in other counties along this route is being done either by bond money or county and State-aid funds, and is progressing rapidly toward completion.

The headquarters of the Forrest Highway Association are in Rome, Ga., with H. A. Wheeling as secretary.

The Cotton Movement.

In his report of September 24, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the eight weeks of the present season was 1,201,835 bales, an increase over the same period last year of 632,897 bales. The exports were 412,360 bales, an increase over last year of 338,836 bales. The takings were, by Northern spinners, 145,586 bales, an increase of 20,582 bales; by Southern spinners, 364,624 bales, an increase of 102,552 bales.

To Mine Georgia Kaolin.

Plans are being formulated for the development of a 316-acre kaolin property near Gordon, Ga., in Wilkinson county. It is proposed to construct a washing plant with an initial daily capacity of 50 tons and an ultimate capacity of 100 tons. F. H. Oppen, F. P. McIntire, A. B. Moore, E. G. McDonald and T. P. Maynard, all of Atlanta, Ga., will organize a company to undertake this enterprise.

News and Views from Our Readers

Better Representatives at Washington the South's Greatest Need.

C. W. HOWARD, Chattanooga Industrial Board, Chattanooga, Tenn.

Referring to your article in the MANUFACTURERS RECORD of September 16, "Is the South Doing Its Best." That is a pertinent question, "manufacturing" and "commercial." The South is, in my opinion, doing its best with the capital it is able to command.

In an agricultural way, it is not doing its best, and, in my humble opinion, the reason for this is not entirely with the Southern farmer. In your article you speak of the growth and wealth of Kansas and Iowa. These States have not accomplished all of this without the substantial aid of the Federal Government. I doubt if there is a township in either one of the States you mention that the Agricultural Department at Washington could not tell you what its soil was especially suited for. How many spots in the Southern States would it be possible for them to do this, to say nothing of townships or counties?

I do not believe that this is the fault of the Government, but rather the fault of our representatives. The North, East and West expect their representatives in Washington to secure for them everything under heaven that they want and that they do not want to pay for themselves. Our representatives are just as bright, but take up much of the time in defending ante-bellum propositions. There is something in the atmosphere around Washington that turns into dignity the ability and energy that we fondly believed our representatives had, and while dignity is a praiseworthy attribute, it does not tell you how to grow potatoes on one kind of ground, corn on another and to plant fertilizer on another before wasting seed upon it.

What is true in an agricultural way is largely true in a mineral way. The Government in Washington today knows more of the geology of Alaska than it knows of Tennessee or Alabama. Take the coal measures of Tennessee. They are not co-related, or at least were not two or three years ago, when I had occasion to investigate.

If I were going to prescribe, and I say it reverently, I would kill off the present batch of Southern representatives. Send young men, whose eyes are looking forward and not backward.

If this is treason, I am done for. However, I believe it to be the truth.

An Asset of the Country.

T. SOEGAARD, New Orleans, La., for many years Danish Consul.

Enclosed please find amount of subscription for the MANUFACTURERS RECORD for two more years. You seem to believe that it is the Danish Consulate who has been a subscriber in all these years, and the assumption is natural enough, for of all those who have to or wish to keep themselves informed on the current industrial and commercial movements, and who want to know what stirs the minds of the people of this land generally, foreign consuls certainly will find as much help and guidance in the MANUFACTURERS RECORD as any other class of readers. Still, it is I, personally, and not the Danish Consulate, you have had for a subscriber, a fact which I feel prompted to state by way of emphasizing my sympathy with what your publication stands for, and my appreciation of the splendid work it is doing.

I have come to consider the MANUFACTURERS RECORD, permit me to tell you, one of the South's, and, indeed, one of the country's great assets. I am, therefore, renewing my subscription, as you see, although I have lately retired, after many years of service, from the said official position.

[After 19 years of active service Mr. Soegaard has resigned as Danish Consul in order to retire from active work. He has been succeeded by H. A. Hallifelt, civil engineer of the Standard Oil Co. of Louisiana, as active Consul. The New Orleans papers, in referring to Mr. Soegaard, pay a high tribute to his activity in developing business interests between that city and Denmark.

He also succeeded in bringing to New Orleans a number of active Danish business men, one of whom has become a large exporter of cottonseed products and another a heavy shipper of lumber. It is men of this kind who as Consuls for various countries increase the business between the country they represent and the city to which they are assigned; that are valuable to the interests of both in developing friendly and commercial intercourse.—Ed. MANUFACTURERS RECORD.]

Diversification and All-Around Enterprise to Build Up Rome.

H. A. WHEELING, Secretary Rome Chamber of Commerce, Rome, Ga.

Looking toward development of our county, I would like to give you a few of the plans we have laid for the development of our rural districts. There are 14 militia districts in this county, and the Chamber of Commerce is perfecting plans for establishing a 40-acre demonstration farm in each of these districts on which diversified farming will be thoroughly demonstrated to the people of these communities. In addition to this, we have plans under way for the encouragement of farmers raising small truck for daily marketing. In order to carry out this scheme it is proposed to place a number of automobile trucks on the various routes in the counties to bring in this truck daily and on the outgoing trip to carry such supplies as the farmers may need. These automobile trucks are to run on strictly schedule time, so that each farmer will know how and when to prepare his products each day for market. They will handle everything of an intrinsic value from the farm, and we believe will do much good toward encouraging our farmers to a more diversified crop. In addition to this, we are now busily engaged in constructing both the Dixie and Forrest highways through our county, which should be completed in the very near future.

In regard to our city improvements, we recently opened the new hotel "General Forrest," one of the most modern fireproof structures in the State. We are also now engaged in building two new concrete bridges and one steel drawbridge at an approximate cost of \$225,000; a new city auditorium and public hospital is also under construction at the present time at an approximate cost of \$150,000. A number of our manufacturers, particularly the steel and iron-working institutions, are working night and day, with all the business they can possibly accommodate. All other manufacturing and mercantile institutions are working with a normal business or better, and the prospects of this community for a busy and prosperous fall and winter are indeed bright.

Rome and Floyd county are now laying such a firm foundation for material development, and with business conditions so very bright, the optimism and the "I will" spirit so prevalent in Rome that when a fellow gets it into his system he has to unload his mind and thought upon someone. I therefore trust you will pardon this unusually long document.

We of Rome are great believers in the doctrines and policies of boosting the South of the MANUFACTURERS RECORD, and wish to assure you that any suggestions or ideas advanced by yourself or by your publication along these lines are always gratefully received.

A Georgia County That Is Coming to the Front

Thomasville, Ga., September 21—[Special].—With the organization of the Commercial Association for Thomas county, having a membership of several hundred loyal supporters throughout the county and a working capital of some \$7000, this Southwest Georgia county is coming to the front with very rapid strides.

Thomas county has been a tourist section in times past, and now is the winter home of a dozen or more of some of America's richest citizens, among them being Col. Oliver H. Payne, John F. Archibald, J. H. Wade, Mel Hanna, Coburn Haskell and others.

The county is making wonderful strides along agricultural lines as well. Up to date 16 silos have been

built in the county within the past six months; 17 cattle-dipping vats for the eradication of the cattle tick have been constructed; more than 100 head of Shorthorn and Hereford cattle have been brought or raised in the county within the past year. Duroc hogs are being imported, and the well-known strains of draft and light harness horses are represented.

The only State and Federal experiment station in Georgia, built and maintained for the purpose of experimenting with various classes of product on the different soils, is located at Thomasville, the county-seat. A farm demonstrator is constantly at work in the county; a tick eradicator also does full-time work, and Thomas county citizens appreciate and realize the value of their services.

The Commercial Association's work is for the benefit of the entire county, and the new secretary, Lester C. Busch, who has had six years' experience in this line at Mt. Vernon, N. Y.; Lagrange, Ga.; Bristol, Va.; Fond du Lac, Wis., is actively engaged in lining up the forces of the new organization for permanent and effective constructive work for Thomas county, Georgia.

Learning Self-Reliance and Diversifying Crops

FRANK N. SNELL, General Manager Louisiana Red Cypress Co., New Orleans, La.

We were very much interested in reading your last issue, especially the article in reference to the grain crops of the South this year. We were not only very much gratified, but greatly surprised at the report that the South's grain crop this year will exceed in value by nearly \$200,000,000 the best cotton crop ever produced in the South.

In many cases we believe the farmers were practically forced to raise grain because the banks and others loaning them money for seeding and carrying charges until their crop could be harvested declined to loan them enough so they could buy feed for their stock, as they have done in the past, but flatly told them they must raise grain enough to feed their stock and must also raise enough on their farms to feed their families and help. But in spite of this it shows rather conclusively that a great many of the farmers of the South are waking up to the fact that it is very hazardous and poor policy to depend entirely upon the one crop—cotton—and are getting more into diversified farming.

Another point—the more grain they raise the more likely they are to keep more stock, perhaps getting into the dairy business to some extent, which is always a good thing, because it helps immensely in fertilizing their land.

We note that Kentucky, Arkansas and Missouri were taken in when these statistics were compiled, but even so, it shows an amazing condition and one that will no doubt be highly gratifying to everyone interested in the South's welfare and eventual prosperity.

Interested Only in Success of Germany.

CHAUNCEY SMITH, Atlanta, Ga.

I wrote on August 15 to the editor of the Fatherland asking him by what process of reason he reached the conclusion that an embargo on munitions of war for the Allies would result in shortening the war. In reply I received the following:

"Without the possession of the American munitions of war the Allies would have long ago come to terms with Germany. The Allies cannot fight without powder and shells. Without these essential necessities of warfare they would have been very willing to discuss peace terms and thousands of lives would have been saved."

In reply to this I sent him the following letter, to which I have received no reply:

"Referring to your kind reply of the 18th inst. to mine of the 15th, wherein is the reason advanced by you based on anything more than an ex-parte opinion? Furthermore, is it not a fact that the general honestly held opinion in this country, outside of the immediate sympathizers with the German side, is that the Allies are sure to win in the end? And is it not therefore the

logical thing for this country to furnish to the Allies all the munitions possible in order to enable them to bring about the end of the war as soon as possible?"

While, of course, the object of the campaign in favor of an embargo has been quite obvious, it is rather interesting to see from the chief propagandist for Germany in this country this confession that the shortening of the war is desired only in case it operates to the advantage of Germany.

The Outlook Was Never Brighter.

J. K. DE LOACH, Manager Southern Machinery Exchange, Jacksonville, Fla.

This month is the first evidence that we have had of a revival of business. The business actually booked, together with that in sight, makes us feel optimistic for the immediate future.

The outlook here for the fall and winter was never brighter. Lumber and naval stores are on the mend. The phosphate rock people seem to be getting business. There will be a light citrus crop at fair prices, and with easy money in the North and the California fairs over and Europe more bottled up than ever we expect a record crop of tourists.

How Many Others Will Follow This Example?

JAS. GOULD, Citizens' Bank Building, Pine Bluff, Ark.

I am enclosing you my check for \$4, and ask that you send the paper to Otis & Co., bankers, Cleveland, O.

All the South needs to do is for her big newspapers to follow the steps of your journal, show the world what we have and what we are doing, let her people quit growling about hard times, economize, take advantage of what God has given us, and in a few years' time we will be independent of the world.

I get more valuable information from reading the MANUFACTURERS RECORD than from any other trade journal on my files.

Build Automobiles South the Advice of a Southern Engineer.

C. D. MUNDY, Contractor and Engineer, Scioto, O.

Please find enclosed check for \$4 for subscription.

As you suggested that you would be glad to have views in regard to business and material development of the country, I would suggest that you do all you can to get automobile manufacturers located in the South. We are sending millions out of the South for automobiles which should be made at home.

Manganese Ore Mining in Virginia.

CRIMORA MANGANESE CORPORATION, New York.

Plans for our new plant at Crimora, Va., have been practically completed, and the work on the foundations is being pushed rapidly.

We are confident that the new plant will be in operation early this fall, with an output of 100 tons of washed manganese ore daily.

During the period of construction we are employing about 60 men, and the construction of the mill is under the supervision of the Ruggles-Coles Engineering Co. of 50 Church street, New York city.

The plant when completed will consist of a washing, crushing and separating mill, and we shall be glad to keep you informed of our progress.

A Cotton Harvesting Machine That Works.

W. K. DANA, Treasurer Dana Warp Mills, Westbrook, Maine.

I have changed one of my old cotton harvesters and made it so it works to my satisfaction and beyond my expectation. I am rebuilding it so as to make it more firm and substantial and a little more room for the different parts, and I hope to have it completed inside of a week.

Good-by Forever.

T. H. SMITH, Trustee the Mississippi Oil & Gas Co. Operative Joint Stock Co., Reform, Miss.

Send me a bill of the amount we owe you to this date; then do not send us the MANUFACTURERS RECORD any more. Since the editor has joined the "Allies" and is fighting Germany, the MANUFACTURERS RECORD will do us no good here. When its editor recovers from his English hallucination you may send us a copy. Until then, adieu.

N. Tesla on the South's Needs.

New York, N. Y., September 27.

Editor Manufacturers Record:

I have just read with great interest your excellent article in the Herald, which will be for many a revelation. As for myself, I am not at all surprised at the conclusion you have reached, although it is startling. Precisely such a thing has happened in Serbia, which is a sort of Paradise, where wheat, fruit and wine can be had in such abundance that next to nothing was done to exploit other resources and develop manufacture.

Judging from your article, what the South needs more than anything else is the harnessing of waterfalls and electrification of the country. Power is, for many reasons, more necessary there than in the North.

Yours sincerely,

N. TESLA.

This refers to a full-page article in the New York Herald by the editor of the MANUFACTURERS RECORD emphasizing the possibilities of diversified agriculture in the South, the injury to this section by too much attention to cotton, and referring also to the vast natural resources of the South awaiting development.

Diversification Spreading in Louisiana and Texas.

N. M. LEACH, General Traffic Manager the Texas & Pacific Railway Co., New Orleans, La.

I have been particularly interested in the article on grain production in the South. This has been reproduced in a number of local newspapers in Louisiana and Texas. We are particularly interested in diversification in Louisiana and Texas, and have been lending assistance through our agricultural department. Results are commencing to materialize beyond our expectations.

Suggestions Invited as to How to Utilize Some Southern Woods.

DR. W. ROSS DAVIS, President Whiteville Commercial Club, Whiteville, N. C.

I have quite a lot of small and some large tupelo gum, buck cypress and black gum I wish to manufacture into some useful articles. Can you advise me what I can make and where I can get the machinery for making same? I have the power, railroad facilities and plenty of cheap labor. If you are not familiar with the kinds of wood, will send small samples.

Bright Outlook for Business Revival.

A. T. WOODWARD, Woodward & Smith, Lawyers, Valdosta, Ga.

Everything in this part of the State is feeling fine over the present outlook for a revival of business in every way. Our Sea Island cotton market today reached 23½ cents, and, of course, this makes everybody feel good. At the same time last year it was bringing only from 16 to 18 cents.

More Fun Poked at Henry Ford.

[New York Herald.]

Engineering societies will greet the discovery by Mr. Henry Ford of a gasoline motor which will operate under water as the most wonderful invention of the age—if it works. Heretofore the operation of a gasoline engine or a heavy oil engine has depended for its success upon

the use of air to furnish the oxygen necessary for combustion. Any layman who has seen a gasoline motor operate is aware that each stroke requires for the explosion a volume of air hundreds of times greater than the volume of the liquid gasoline consumed in the cylinder.

To assume that a submarine could carry a sufficient quantity of air to operate a gasoline motor for more than a few minutes is too farcical to deserve even a moment's consideration, and if we assume the gasoline motor to run in a vacuum it would be difficult to persuade the submarine crew to do the same.

There is the story of a Ford car having run for several miles without gasoline, traveling that distance merely on its reputation, and from an engineering point of view there is little hope for any other solution in the projected runabout submarine.

Wants New Industries to Create Employment.

W. R. TAYLOR, Town Clerk, Town of Colonial Beach, Colonial Beach, Va.

Our town of Colonial Beach, Va., desires employment for about 500 hands. We wish to secure your assistance in suggesting to our business men some manufacturing business or enterprise to furnish this employment. Or perhaps you may be able to suggest some concern that would like to locate on deep water transportation.

We have to offer free factory sites and wharf sites, and every assistance that our business men can afford.

Any suggestion you may make along this line will be greatly appreciated by our citizens.

Can't Afford to Miss One Issue.

S. A. LACY, President Lacy Construction Co., Anniston, Alabama.

Enclosed check for \$6 for two years' subscription to your MANUFACTURERS RECORD as per your offer.

Please mail to this address as in the past. We failed to receive the issue of September 9, but suppose it was an oversight, as that is the only time it has occurred.

We think your publication is the greatest thing of its kind in existence, and can't afford to miss even one issue of it.

A Very Laudable Wish.

JAMES M. MCBURNETT, the Great Southern Iron & Development Co., Inc., Wedowee, Ala.

Herewith find my check for \$6, for which send me your paper for two years from date last paid up. I certainly appreciate your paper. I only wish that the entire South was a subscriber. It would mean MUCH.

Teaching Every Citizen the Importance of Fire Prevention.

Raleigh, N. C., September 25—[Special].—Arrangements have been made for the State-wide observance of October 9 as Fire Prevention Day in North Carolina. The fact has been established that for a number of years the average fire waste in this State has reached the big figure of \$3,000,000. The last Legislature enacted a law calling on the Governor, the superintendent of public instruction and the insurance commissioner to designate the 9th of October in each year as Fire Prevention Day, and directing that the Governor should issue a proclamation to that effect. This Governor Craig has done, and State Superintendent Joyner has directed every teacher in the public schools to read the proclamation to the children.

There will also be special fire drills at all the schools of the larger class, to which the parents and other patrons are invited. The Farmers' Union is doing the same sort of missionary work and the federated women's clubs are co-operating. The insurance department puts in the field a woman who will visit all these clubs and meet the housewives' leagues in the cities and towns and give them information and instruction. It is the biggest movement against fire waste ever undertaken in the South, and by means of it it is expected to reach in one day something like a million people.

New Organization Created on New Lines

Tampa, Fla., September 22, 1915.

Editor *Manufacturers Record*:

I will explain to you briefly our method of organization of the South Florida Chamber of Commerce, which will enable you to see that it will require time for us to get in complete working order.

There are 22 counties in South Florida, in which the climate and soil conditions are very similar; therefore the community interests of these 22 counties are also similar. There is almost as much difference between the habits of thought, environments and possibilities between South Florida and North and West Florida as there is between Florida and Tennessee. With all South Florida realizing this situation, they organized the South Florida Chamber of Commerce to work for the benefit of South Florida as a whole without regard to any further sectional differences. There has been in past years some strong feeling between the East Coast and the West Coast of South Florida. We are breaking down this barrier, and are working together as a unit, east and west, for the good of South Florida.

Our method of organization is this:

In each county in South Florida there are numerous towns having their local Boards of Trade, most, if not all of them, unusually active and energetic, but naturally working for their own individual municipality. These Boards of Trade are, and always have been, good things for the town in which they are located. Any number of the most promising towns of South Florida have been built up entirely by the activity and enterprise of a comparatively few men in the community who comprise their Boards of Trade, and it is a foregone conclusion that in any community that is alive and hustling its Board of Trade membership is comprised of the cream of the community. It also goes without saying that the man in that Board who, of the whole lead, is the most energetic, active, able and pro-

gressive, is, by his followers, in recognition of those abilities made president of that local Board.

It is, therefore, perfectly logical to assume that in any town worth while, the citizen most worth while is the president of its Board of Trade. Of course, towns without Boards of Trade are not worthy of consideration, because they are too dead to count anyway, and are simply excess baggage in the train of progress. Therefore, believing in this way, and arguing along these lines, we decided that if the South Florida Chamber of Commerce is to be composed of the very cream of the cream of South Florida hustlers, we will organize in this way.

In each county in South Florida there will be organized a County Board of Trade.

Each local Board of Trade in the county will become a member of the County Board of Trade.

The executive committee of each County Board of Trade shall consist solely of the presidents of the local Boards of Trade and affiliate with the County Board of Trade, and this executive committee elects from their own number the president and first and second vice-president of the County Board of Trade.

Therefore, the County Board of Trade becomes an association of associations, and the governing body of the County Board of Trade is composed solely of the Boards of Trade in that county affiliated therewith.

Our idea is that we would thereby bring together an executive committee in each county of from 8 to 15 men, the cream of the progressive men in that county, and of this selected group of men then elect as their president from their number the man, in their judgment, best fitted to head them.

It is logical to assume that the president of the County Board of Trade is the one man in that county best equipped by education and achievement to help that county and the world. Therefore, the South Flor-

ida Chamber of Commerce as organized, having for its membership all of the County Boards of Trade of South Florida, and every member of the executive committee of the South Florida Chamber of Commerce, is a president of the County Board of Trade in South Florida and the officers of the South Florida Chamber of Commerce must be elected by the executive committee of the South Florida Chamber of Commerce from its own body. Therefore, having gathered together in the various counties the one man best fitted to represent each county, and having selected from these 22 men by his peers the one man who, in their judgment, is best fitted to head this general body, is it not fair to assume that the South Florida Chamber of Commerce should not, through this sifting process, consolidate into a body of 22 men, the cream of all South Florida, for its development?

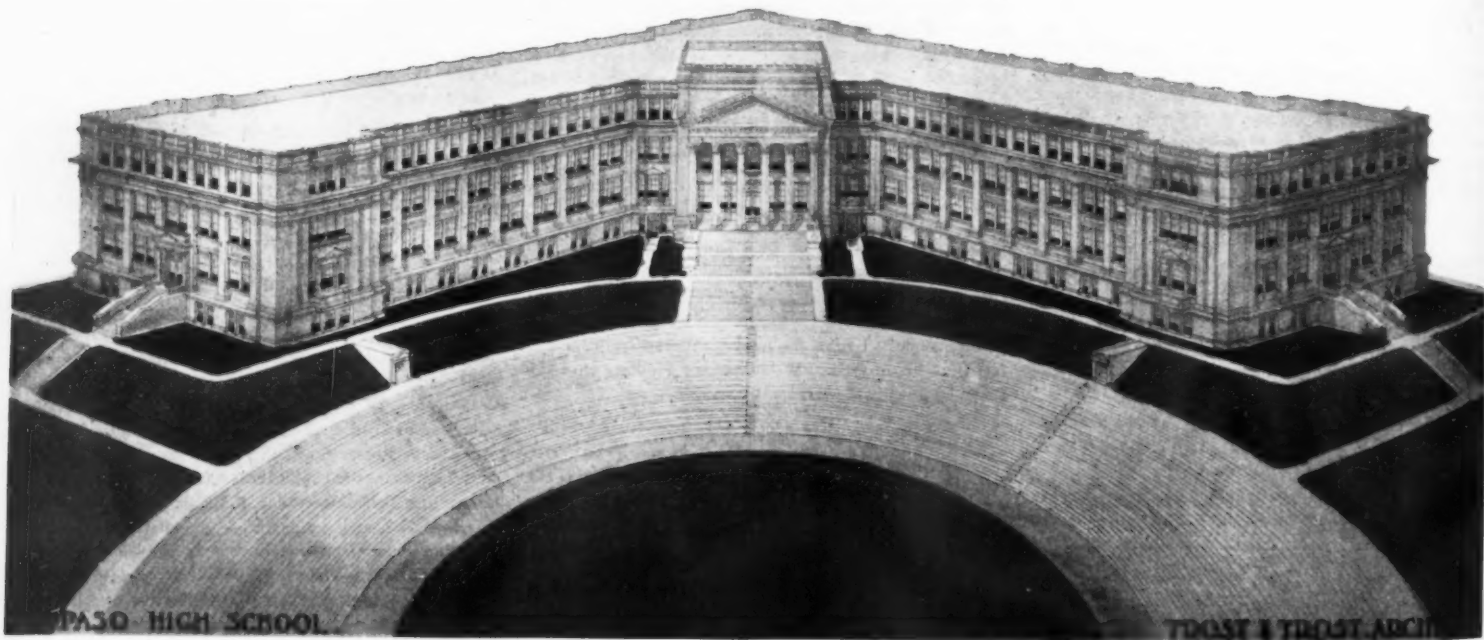
I can say this without throwing any bouquets at myself, because I have not been selected this way. When the preliminary organization was formed in Tampa, something like two months ago, necessarily we were obliged to elect temporary officers to serve until a complete organization of South Florida could be brought about on the above lines, and a meeting will be held at Orlando, Fla., on November 11 for the purpose of adopting the final constitution and by-laws along these lines and the carrying into practical operation of this theory.

No complete description of this plan has ever been published either by any of our State papers or any outside papers, and as the *MANUFACTURERS RECORD* has seen fit to interest itself so much and so favorably in Florida developments, I have taken pleasure in dictating to you first of all our outline of organization and scope of our aim, in order that you may, if you see fit, publish such of this as seems worth while, in order that other communities may, perhaps, think along the same lines and follow our methods of organization.

SOUTH FLORIDA CHAMBER OF COMMERCE,

By W. C. Temple, President.

A \$500,000 HIGH SCHOOL FOR EL PASO.



HALF-MILLION-DOLLAR HIGH-SCHOOL BUILDING, EL PASO, TEX.

If there is any other city in the United States of about 50,000 population which can show a more attractive high-school building than that which is now being built at El Paso and illustrated on this page, the *MANUFACTURERS RECORD* would like to have the opportunity of publishing a picture of it. This El Paso building, which is being erected at a cost of \$500,000, is typical of a widespread and rapidly growing tendency to secure the best educational facilities obtainable, especially in the construction and equipment of school buildings—a tendency which is no more manifest in any section of the country than in the South and Southwest.

The building will be of reinforced concrete construction throughout, faced with pressed brick, and terra-cotta. The site consists of four entire blocks, with the building occupying the northwest corner. The auditorium is located on the first floor of the building at the extreme northwest corner, and, with the balcony, will seat 1500. A hot blast and steam heating system will be installed, together with a complete ventilating system throughout the structure, with air washers. The roof will be of concrete construction, Johns-Manville and Barrett specification material. There will be a large outdoor stadium, 300x390 feet, with oval running track one-fourth of a mile in length. The stadium will be lo-

cated in front of the main entrance of the building, and will be equipped with 17 tiers of reinforced concrete seats rising to a height of 30 feet. The contract for the reinforced concrete frame was awarded several months ago to Joseph E. Morgan of El Paso, and this portion of the building is about completed. For this construction the El Paso Foundry & Machine Co. furnished 190 tons of Bethlehem columns and girder beams and 153 tons of standard sections, including trusses, girders, beams, columns and angles. Bids for the general contract will be opened October 20. Plans and specifications for the structure were prepared by Trout & Trout of El Paso.

A \$300,000

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Enormous Deposits of Abrasive Materials in the Southern Appalachians.

Waynesville, N. C., September 22.

Editor Manufacturers Record:

Please print in your world-wide circulated paper a compilation of the figures and facts regarding the basis of supply so far as the United States is concerned, and, so far as the United States Government Geological Department is advised, of the world basis, of supply for crude abrasive material. I will take first the garnet base of supply, as few people know the vast amount of garnet paper required in the abrasive world. Corundum, the highest class abrasive known to the world, has been largely supplanted by an artificial product almost equal in its abrasive qualities to corundum. This material is produced at Niagara Falls by a system of electric heat fusing of sawdust, salt, coke and sand. This makes carborundum, and what is called crustolon, and by fusing under many thousand degrees of heat, bauxite, which is the base of production of aluminum, what is called alundum is produced. Crystallized under the fusing heat of electricity, this product is ground up into various degrees of fineness of grain and by various characters of cementing bonds is baked into wheels that are but little less efficient than corundum in their abrasive qualities for grinding purposes and for abrasive sand-paper.

It is only by new methods of lessening the cost of production, with lower freight rates, and the European war shutting off importation as ballast under the free list, that the corundum mines of the nation have begun to reopen.

I believe the State of North Carolina and the State of Georgia can supply not only America, but the world, a hundred years to come; certainly with high-class garnet, if not corundum, and then have some to spare.

On Sugar Loaf Mountain, near Willetts, Jackson county, N. C., there is a deposit of what is known as ruby-garnet, called rhodolite; 1000 tons of ore quarried from a cut 50 feet wide, 100 feet back and 125 feet perpendicular depth yielded an average above 50 per cent. and as high as 80 per cent. available abrasive ruby-garnet, or rhodolite. This ore is under a capping of weather-affected ore not to exceed from two to six feet thick, when the pure ore, unaffected by the elements and of original primeval formation, is reached. A recent measurement by the representative of the United States Government and State Geologist showed this deposit to be 200 feet wide, 1000 feet deep, $1\frac{1}{2}$ miles long on Sugar Loaf Mountain. An average cubic foot was found to weigh 187 pounds and to yield 93 pounds of available high-class abrasive garnet, showing the deposit to carry close to 50,000,000 tons available abrasive garnet, or rhodolite.

Where this leads to the northwest from Sugar Loaf Mountain is a crosscut 1000 feet below the outcropping on the peak of the mountain. The solid ore is visible 200 feet wide and extends on northwest $3\frac{1}{2}$ miles, visible from solid mass outcroppings to the northwest face of Double Top Mountain, one of the largest and highest mountains in the Appalachian range, where the ore is exposed solid over 100 yards wide and nearly 250 feet

perpendicular, carrying an average of 60 per cent. rhodolite, or ruby-garnet, impregnated with spinel and alundite garnet.

Southwest from the west front of Sugar Loaf Mountain, which has an altitude of 5300 feet, while Double Top has an altitude of 6200 feet, this same lead extends, following the mineral zone of the Southern Appalachian range, and is exposed by heavy outcroppings over one and one-half miles to Sutton Mountain, where it appears in a large deposit, showing this deposit of ore to be certainly five miles long, 200 feet wide and 1000 feet deep, yielding an average of 93 pounds of available garnet to the cubic foot. This entire deposit is in mica schist, quartzite, some silicate, and in portions very heavily impregnated with copper pyrites, because its entire northwest wall is a copper lead, and next to the wall much of the rhodolite is the color of oriental ruby. The rest of the deposit is a beautiful uniform pink color, uniform in hardness and uniform in high abrasive qualities, and easily mined and concentrated.

A careful measurement of one-quarter of a mile of another lead of what is called red-colored garnet, and the mining of over 1000 tons, shows the ore mine-run to average from 12 to 15 per cent. pure available abrasive garnet. This garnet is exactly the color and quality of the North River Adirondack garnet, and one-quarter of a mile of this deposit is estimated to yield 700,000 tons. The deposit is traceable by outcrops over a mile and one-quarter.

A deposit of pale-rose garnet, from which 1000 tons of ore has been taken, in Jackson county, North Carolina, yields from 30 to 60 per cent. available abrasive garnet of high-class abrasive qualities. By measurement this deposit is exposed 70 feet wide, 400 feet deep and one-half mile in length, but not tested any greater distance, though there is evidence of greater length of the deposit.

All through Haywood, Jackson, Macon, Clay, Madison and Mitchell counties, North Carolina, are deposits of nodule or loose garnet and corundum in beds and in pockets similar to the pockets in the Adirondacks. There is a single bed of a light old gold colored garnet in Jackson county from the size of a small bird shot to the size of a goose egg. The deposit is estimated to be 200 feet wide, and outcroppings are visible for over one-half mile; by tests it yields the rise of 35 per cent. of garnet to the cubic yard.

Professor Yates, the lamented distinguished Georgia geologist, reported that not far from the North Carolina line there is in Georgia a deposit of a most beautiful pink-colored garnet over 100 feet wide, which appears by outcroppings to be 300 feet deep, with every indication of being a permanent, inexhaustible base of supply. Under a 10-ton test it yielded from 30 to as high as 60 per cent. available garnet, near 8 hard.

There is a deposit of corundum and garnet combined near the Georgia line, in North Carolina, about four miles long, running from 50 to as wide as 200 feet; the greatest depth yet explored is about 300 feet—a perpendicular face on the mountainside. A mill test of 500 tons turned out about 30 per cent. of alundite garnet and blue sapphire-corundum combined. About half of the concentrates are alundite garnet and the other half

pale blue sapphire-corundum, about 15 per cent. of each mine-run.

There is being brought into America, under the free-trade list as ballast, as near as can be ascertained, about 3000 tons per annum of what is known as Spanish garnet. It is shoveled up like sand along the lake shores and river shores, and sacked and shipped as ballast. Geology or mineralogy, so far as the United States Government is advised, gives no account of any garnet of consequence being deposited in quarries of solid mass formation anywhere in the world outside of the United States. It is peculiarly adapted to semi-tropic climates, and does not seem to prevail in the extreme frigid zones. The demand for abrasive ores are doubling and trebling every year, and opening up a broad field for the profitable investment of capital and employment of labor. The European war is giving a great impetus to the industry of the production and manufacturing of abrasive goods.

S. A. JONES.

Dixie Highway Rally in Jacksonville.

Good-road enthusiasts from all parts of Georgia and Florida gathered in Jacksonville this week to attend the Georgia-Florida Dixie Highway convention, held under the auspices of the Jacksonville Chamber of Commerce. The purpose of this meeting was to promote interest in the Dixie Highway and its branch roads, and to deal with matters pertaining to good roads generally in the States of Georgia and Florida.

Official proclamations of both Governor N. E. Harris of Georgia and Governor Park Trammell of Florida set aside Tuesday and Wednesday of this week to be known as "Dixie Highway Days." Similar action was also taken by Mayor Bowden of Jacksonville.

The meeting drew a large attendance from both States, especially because the question of establishing portions of the main and branch routes of the Dixie Highway are still to be determined and the different communities took this opportunity to present their claims for selection.

The delegates were welcomed to Jacksonville by President C. H. Mann of the Jacksonville Chamber of Commerce, whose address was responded to by Judge Moses Wright, president of the Chamber of Commerce of Rome, Ga.

Among those making formal addresses were Mayor J. E. T. Bowden of Jacksonville, Judge P. S. Meldrim of Savannah, Governor Park Trammell of Florida, Governor N. E. Harris of Georgia, Judge M. M. Allison, president of the Dixie Highway Association; Senator N. P. Bryan of Florida, John H. Williams, chairman Good Roads Committee, Chamber of Commerce; W. S. Gilbreath, field secretary Dixie Highway Association; Mrs. W. B. Young, representing Florida Woman's Club, and Ex-Governor A. W. Gilchrist of Florida.

Arguments were presented by representatives of the eastern, western and central routes leading from Macon to Jacksonville, setting forth their claims as to why their particular routes should be selected by the Dixie Highway Association for the official one.

ARANSAS COUNTY, TEXAS, TO BUILD \$300,000 CAUSEWAY.



A \$300,000 CAUSEWAY TO CONNECT ROCKPORT AND LA-MAR, TEXAS. TO CONSIST OF 1733 FEET OF PROTECTED HYDRAULIC FILL AND 13,000 FEET OF CONCRETE BEAM AND GIRDER BRIDGE WITH LARGE DRAW SPAN IN MIDSTREAM.

Bonds to the amount of \$300,000 will be issued by the Aransas County Commissioners, Rockport, Tex., for the construction of the proposed causeway shown in the accompanying illustration, to connect the Live Oak Peninsula at Rockport with the mainland at La Mar, Tex. This structure will consist of 1733 feet of pro-

ected hydraulic fill and 13,000 feet of concrete beam and girder bridge, with a large draw span in midstream. It will open a direct route from the north and east of the State to the large harbor at Aransas Bay, and will be an important link in the all-coast highway from Houston to Corpus Christi, Rockport and Brownsville.

It will be a link in the Bay Shore Scenic Route connecting with Corpus Christi and the causeway which Neches county is about completing.

Whiteaker & Washington, civil engineers, San Antonio, Tex., are the designers of the structure, and Percival & Son, Rockport, are the resident engineers.

Diversification on Large Scale Established in North Carolina

[Special Correspondence Manufacturers Record.]

Raleigh, N. C., September 25.

A campaign has been launched in North Carolina for the proper selection of seed corn. This important movement is under the direction of C. R. Hudson, the United States agent for North Carolina for farm demonstration work, and his farm demonstration agents in 70 counties are all arranging to make the seed selection day, October 11, worth while. There are over 4000 boys in the corn clubs in North Carolina, and not only will all these be reached, but they will be active that day in showing the best varieties of corn and the proper modes of selection. The definite object in view is to bring the corn yield next year up to 72,000,000 bushels. In the past five years both acreage and yield per acre increased. The revelation of what can be done was first made in the autumn of 1909, and it was due to the offer of a big prize by the Raleigh Chamber of Commerce, several corporations and one individual adding other prizes. Then came the boys' corn clubs, while the State Agricultural Department, under the direction of Commissioner William A. Graham, got the adult farmers into the movement, so that fathers and sons are working for a common purpose.

State Agent Hudson tells the writer that in a couple of years there will be farm demonstration agents in all the 100 counties. This season alone they are bringing into cultivation over 100,000 acres in crimson clover, much of it in counties where it has not heretofore been sown. In the county of Cumberland this season 4000 acres were in this crop, and the farmers were delighted with it. The alfalfa area is being extended, but, as Mr. Hudson says, only good farmers can raise this particular crop.

In the course of a visit to the attractive farm of the State Agricultural and Mechanical College at Raleigh it was found that two crops have already been gathered this year, and a third set of crops planted. The first crops harvested were of wheat, oats, rye, annual clover and vetch; the second of corn, cotton and cowpeas, and now the land is seeded in small grains, particularly rye, also in vetch and annual clover, and on part of the farm, covering 140 acres, the clover is now green and fine. Vetch stalks over four feet high, not including the roots, were produced. This gives an idea of what can be done.

There is plenty of evidence that the present good price for cotton will not cause a return to the one-crop way of farming. Farmers have gone into the raising of home supplies this year to a greater extent than at any time since, say, 1872, when what has been termed the "cotton craze" took hold. Land-owners and tenants, too, are now going far toward raising their own foodstuffs and cutting down the heavy bills which have heretofore been paid for food supplies brought in for man and beast.

Nor are the women idle, for there are girls' canning clubs in 40 counties, and they have already put up this season over 600,000 cans of vegetables, not to speak of jellies and other things in glass. Their canning is done under the direction of Mrs. Jane McKimmon, and it is the plan to bring in every county for this important work. The girls find no trouble in selling their products—in fact, there is a demand for them North, and merchants in the various parts of the State are taking all they can get. It is expected that more than a million cans will be for sale next season. A number of merchants advertise this particular class of goods as of extra full weight and guaranteed quality. Canning is being taught in many schools, and is being developed in all other sorts of ways. It is carefully estimated that three or four times as much canning has been done this year than ever before in any twelve-month. Mrs. McKimmon assures the writer that there is no end to this movement.

North Carolina becomes a larger seller of cottonseed hulls and meal this year, due to the fact that the boll-weevil in South Georgia has cut off the supply from that territory, there being a quarantine of it. Atlanta, the biggest hull market in the South, is buying all the Raleigh hulls it can get, and paying the freight, \$3 a ton, on them, so they cost there that much more than

they do here. The advance in the price of cottonseed meal is also sharp, and is largely due to these same causes.

As yet little talk is heard in North Carolina about the boll-weevil, which is sure to come. Let no one think that North Carolina is too chilly for the weevils. They can endure a lot of hard life and yet be ready for business.

However, when weevils do arrive in North Carolina they will find most farmers ready to meet them, not with the glad hand, but with a variety of crops and with cotton as a side line.

Arrangements are being made for fig-growing on a considerable scale in the northeastern part of the State, near the coast and the great sounds, in what are known as the black lands. The State Agricultural Department has recently established a test farm in the heart of these lands, which lie in seven counties. Figs grow there in profusion, and reach a great size. On Roanoke Island they reach a weight of from six to eight ounces, are as large as an ordinary orange, and the trees never fail to bear two crops a season, nor are they affected by winter weather. The soil there is a dark sand. Figs are in great request in the North as well as at home, since they will only grow in about one-third of North Carolina. In the coast country the fig bushes are trees, and their fruit is in steady demand, but there has been no planting on a large scale.

In the eastern section of the State the cotton crop is badly short, and this is declared to be due to the lack of potash in the fertilizers. This was unavoidable, and there is little potash in the soils in that section, while from Raleigh westward it is found in many parts and hence but little is needed. Commissioner of Agriculture Graham pointed out to the writer rocks bearing potash near Raleigh and in Union county, and he says there is a good natural supply on his farm in Lincoln county not far from Charlotte. It is in the clay soils, in the disintegrated stone. Two months ago the cotton stalks made a brave show, but as the season grew older they felt the lack of potash, and on many farms bolls are short, and some have opened before they were mature. Of course, there are crops which are up to standard, but as a general rule the deterioration is manifest.

FRED. A. OLDS.

BIG TERMINAL IMPROVEMENTS AT MOBILE.

Wharves, Warehouses, Docks and Cold Storage Included in Million-Dollar Proposition.

[Special Correspondence Manufacturers Record.]

Mobile, Ala., September 24.

An enterprise which will mean much to the city of Mobile and its environs as well as the State of Alabama and the South is that of the Terminal Transfer & Storage Co. after its present plans shall have been executed. On the 22d inst. the announcement was made of the formal letting of contract for the erection of buildings, wharves, docks and all equipment necessary for the transaction of its business on an extensive scale. The plant, when completed, will cost upward of \$1,000,000.

Work will be under the direction of Stone & Web-

ster of Boston, and plans and specifications are being perfected, after which time they will be given out for the benefit of the public.

It is proposed to utilize 33 acres and to dredge two large slips on the banks of the river several blocks south of the city, giving 1½ miles of wharfage and dockage, with trackage facilities for 250 cars. There will be space for protected storage, open storage, yard storage, cold storage, United States bonded warehouse and dockage, thus making it attractive for all classes of business.

The yard storage will permit the carrying on hand of large quantities of pig-iron, cast-iron pipe, soil pipe, etc., for export; also the shipper of perishable goods will be protected by a big cold-storage plant. It is also proposed to install the latest and most improved mechanical labor-saving devices for the economical and expeditious handling of business. It has been suggested that probably the large Eastern coffee roasters might have facilities installed for the roasting of coffee in Mobile and use these storage accommodations for a distributing point. It is also suggested that the Gulf States Steel Co. and American Steel & Wire Co. of Birmingham might use the warehousing facilities for their export trade as well as coastwise. These suggestions, of course, are indicative of the necessity for and possibility of such a plan, and are the reasons why such a concern should succeed in such an undertaking in the harbor of Mobile on a much larger scale than is at present proposed.

Y. A. DYER.

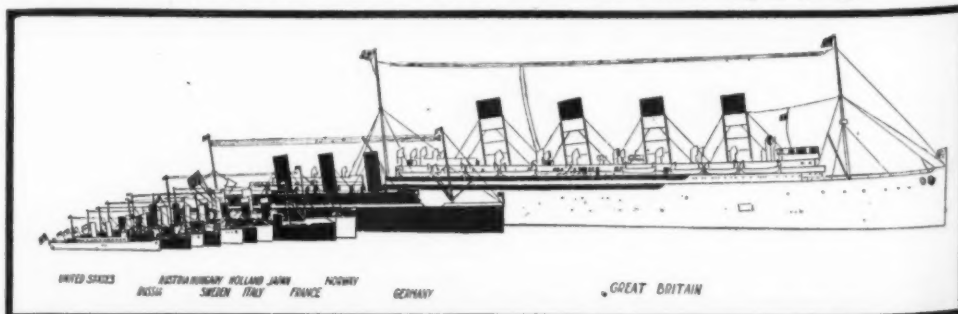
THE NEED OF AN AMERICAN MERCHANT MARINE.

The inferior position the United States occupies among the nations of the world in the matter of ship-

PERCENTAGE OF OVERSEAS COMMERCE CARRIED IN AMERICAN VESSELS IN SPECIFIED YEARS 1789-1914

1789	23.8
1795	90.0
1800	89.0
1810	91.5
1820	89.5
1830	89.9
1840	82.9
1850	72.5
1860	66.2
1870	35.6
1880	17.4
1890	12.9
1900	9.3
1910	8.8
1914	9.7

tonnage is graphically demonstrated by the accompanying charts designed by the National Marine League of the United States. As the chart shows, the United States stands eleventh today in tonnage.



SHIPS ARE DECLARED TO BE A NATION'S SHOES. THIS NATION'S LACK OF SHOES IS STRIKINGLY BROUGHT HOME IN THIS CHART.

The Rise of Militarism in Germany and Its Relation to the Democracy of This Country and the World

No. 2.

[This is the concluding chapter of Mr. Chidsey's article on the rise of militarism in Germany and its relation to democracy. The two closing paragraphs of this article, pointing out that the European war is a contest between militarism and democracy, of world-wide importance, make a study of this whole situation of special interest.]

By CHARLES E. CHIDSEY, Pascagoula, Miss.

At the close of the war that followed, Bismarck thought that with France crushed and burdened with the immense war indemnity that he had imposed upon her, that she would be crippled for a generation at least to come, and that the German troops for that time would be living upon her without any expense to Germany, and this would give him the leisure he craved for turning all of his thought toward meeting what to him was his most serious problem, the internal dangers of the empire.

The rapid recovery of France from the crushing blow that she had received, her payment of the war indemnity and the reorganization of her army dispelled his illusion. Then he determined that France must limit her armament to a figure fixed by him or Germany would declare war upon her. In order to do this, he must first isolate France and have the acquiescence of Russia in his designs. M. de Lavaleye, discussing this matter in the Fortnightly Review for November, 1879, makes the statement, and probably upon good authority, as it has never been refuted, that Bismarck offered the Czar to help him to take possession of Constantinople if he would consent to Germany's meditated attack upon France, and the Czar indignantly spurned the proffered bribe.

Foiled in his plans here, Bismarck had to adopt other plans for the isolation of France and of preventing her from forming an alliance with some other European power—especially Russia. "He made a beginning by his compact with Austria," writes "Scrutator" in 1880, "and he is apparently endeavoring to frighten England into some imprudence which shall make a breach either with France or Russia. An inspired article in a recent number of the semi-official Grenzboten suggests that a great European war can only be averted by England lending her support to the Austro-German alliance. This is explained to mean that in event of a Russo-French alliance England is to notify that she will defend the neutrality of Belgium, Luxemburg and Switzerland, and in addition insist on the neutrality of the Baltic and the North Sea as well. A 'spirited foreign policy' which would fight Germany's battles with British gold doubtless would be very convenient for Prince Bismarck. Hence the frantic efforts of the German press to secure a majority for Lord Beaconsfield in the general election. In brief, the political situation in Europe at present appears to be somewhat as follows: The German Empire is exposed to two serious dangers—the growing power of France and the rapid development of social democracy in Germany."

Take from the above quoted passage from "Scrutator" the words "Bismarck" and "Beaconsfield," and it summarizes the condition of European politics during the spring and summer of 1914.

The social democrats of Germany always maintained that they were democrats first and Germans afterwards. "Prince Bismarck has been uneasy on the subject for years past," continues "Scrutator," "and the strides which socialism has been making lately have seriously alarmed him. But it would be impolitic to let the world know the extent of the canker which is rapidly spreading beneath the smooth surface of the Bismarckian policy, and which one day may bring it down with a crash." And again: "Where is this to end? The army of Germany has ceased to represent either the Prussian monarchy or the German Kaisership, except so far as these represent the feelings and aspirations of the nation. The German army is, in fact, the German nation. It follows that when we are discussing the dissemination of socialistic principles and ideas among the German people, we are, in fact, discussing their dissemination

in the army. If Prince Bismarck means to arrest the growth of socialism in Germany, it is plain that he has no time to lose. Does not every counsel of prudence dictate to Prince Bismarck the policy of anticipating events?

"But how? His present object is to endeavor to form a league of the conservative elements throughout Europe against socialism and against France, which, as a republic, cannot help affording a most potent moral support to democracy everywhere."

For more than 40 years it has been part of the legendary history of the Franco-Prussian War that Bismarck annexed Alsace and Lorraine because Von Moltke insisted that they were necessary to form a barrier against future attack by France upon Germany. "Scrutator," however, assigns another and probably the correct reason why he placed this thorn in the side of France. "It has been supposed," he writes, "that in annexing Alsace and Lorraine he allowed his own better judgment to be overborne by the insistence of the military authorities. I have never been able to find a trace of evidence for that opinion, and I do not believe it. It is no doubt true that by annexing Alsace and Lorraine Prince Bismarck was gratifying not the army only, but the whole of the German nation. But nobody knows better than he how to quench national aspirations when considerations of policy require it. Having publicly exonerated the French people, as distinct from their emperor, from the responsibility of the war, a policy of generosity on the part of the victor would have disarmed their resentment. They would have forgiven their defeat in gratitude for being rid of imperialism, and would not have taken even the war indemnity seriously to heart. But the loss of their provinces they will never forgive, and Prince Bismarck knew it. Why, then, did he deliberately resolve to keep a sore perpetually open in the side of a powerful neighbor? My belief is that he was at that time more intent on raising a rampart against German liberalism than in securing a strong frontier against France. France was prostrate, and he turned his attention to an enemy which he feared more than he did the vanquished France. That enemy was the social democracy of Germany."

"Scrutator's" work was published 35 years ago, and I am informed by an eminent bookseller of New York that he has been unable to find another copy, and hence the necessity of the writer quoting him in extenso, so that we may clearly understand the condition of affairs in Europe at the time of which he wrote.

That "Scrutator" correctly analyzed the policy of Bismarck in annexing the provinces of Alsace and Lorraine, i. e., that it was done to keep a rankling sore in her side, making her eager for revenge, a fact that Bismarck could use in urging the Fatherland to submit to his military propaganda, is shown by the following passage from his book:

"In my first letter to the Times, in October, 1870, when Prince Bismarck's terms of peace was only a matter of rumor, I wrote: 'A peace concluded on such basis will be nothing better than a truce, of which the effect will be to keep all Europe in a state of armed preparation for the renewal of the conflict.' On the translation of my book into French a distinguished French Statesman wrote to assure me that every Frenchman shared my opinion on this particular point. 'Mark my words,' said he. 'Till France recovers her lost provinces she will have one, and but one, foreign policy. We shall sit still, grow strong, and watch our opportunity. It will come some day. Our defeat has suddenly disclosed a new danger in the midst of Europe.

It is a great empire of trained soldiers and able commanders, all wielded by a man of consummate political craft and without scruples. Continental Europe, as you justly observe, will henceforth be in a state of armed preparation, which must end in war. France will be careful not to be the first to renew the conflict. We shall lose nothing by waiting. Rashness has been one of the besetting sins of the French. Bismarck has cured us of it, and now Europe will find that we have turned over a new leaf."

That social democracy has never ceased to be a menace to the autocracy of Germany will be shown by a brief sketch of its growth and influence. In 1871 the Socialists had only 3 seats in the Reichstag, and in 1890 they had 35, and 44 in that of 1893, increasing their vote with every poll. The annual Congress of the Socialists met for the first time in 1890, and in 1891 the Erfurt Program was elaborated. With anger and dismay Wilhelm II watched the growth of Socialism, and called the Socialists "the traitorous rabble." He tried a policy of conciliation, which failing, he determined to revive coercion; but in 1895 the Reichstag rejected a measure for punishing by imprisonment attacks on religion, the monarchy, property and the family. A dissolution of Parliament would have been useless, and the Emperor had to be content with denunciations of Socialism. For protesting against one of the Emperor's speeches Liebknecht was imprisoned for treason, and upon his death Bebel became a formidable critic of the Emperor's political dogmas; that "there is only one master in this country, and I am he. I shall suffer no other besides me," and his declarations that he was responsible for his conduct only to God and his conscience.

The Socialist party was in 1913 and is now the strongest party in the German Reichstag, polling over 4,000,000 votes in the general election of that year, and is the only party that represents Democratic opposition. The general election of 1913 made the strength of the respective political parties as follows: Socialists, 110; Centre, 99; Conservatives, 56; National Liberals, 46; Radicals, 43; Poles, 18; Reichspartei (usually voting with Conservatives), 15; Independents, etc., 10.

That Socialism was considered a serious menace is shown, in that in 1913 some Socialist members of the Prussian Landtag were removed from the assembly by the police, and when an appeal was made against this removal as contrary to the law of the empire, the imperial authorities refused to interfere, and an action against the police was lost. One who carefully notes the social and political conditions of Germany and France in 1870 and 1914 cannot help but noticing that they were the same. Like causes produce like effects is a maxim as true in economics and politics as in physics. Commenting on the growth of German Socialism up to 1880, "Scrutator" utters these prophetic words:

"It is impossible that this state of things can last much longer. There must be a general disarmament or a war will follow which will shake the world and perhaps rearrange the map of Europe. In the present temper of the public mind it would be a waste of words to discuss the question of disarmament. There remains the dire alternative of war. But who is to begin it? If we are to believe the press of Berlin and Vienna—that is, Prince Bismarck—the internal disorders of Russia will inevitably force her to seek the gambler's relief in the desperate hazard of a European war. But whenever I see Prince Bismarck accusing some other power of warlike intentions, I feel tolerably certain that he is maturing some scheme of his own of which war is the too probable outcome. I believe that Germany is much more likely than Russia to engage in a great war as a means of escape from external danger and internal embarrassments."

One who has watched the growth of the German Empire and with it militarism will have observed that William II has inherited and, save in the matter of the Austro-German alliance and foreign colonization, consistently carried out the Bismarckian policy, and that the dangers that Bismarck thought threatened the empire in 1880 are the same dangers that threatened it in 1906, when, in the matter of the Algeiras affair, Germany would have forced war upon France—and this was prior to the Russo-French alliance—had it not been stopped by an unexpected obstacle—money. "At the time of the Algeiras conference the financial groups of Berlin used all their influence to induce their govern-

ment to recede from its uncompromising attitude." ("Lowandowski" *Le Marche de Paris, Revue Economique Internationale*, 1906. II. 223.)

The attack of Austria on Serbia in 1914 gave to Germany the long-coveted opportunity of an attack on France. Austrian resentment against Serbia for the death of the heir apparent was only a pretense for carrying out a scheme which that nation has had in view for more than a half-century.

"In the June number of this Review (Fortnightly) I saw," writes W. J. Stillman in 1880, "and read an article by a Conservative upbraiding Mr. Gladstone for having accused Austria of wishing to annex the Balkan tribes, and then having made an apology to the Austrian Ambassador on securing from him the assurance that the Emperor of Austria had no such ambitions or intentions. I don't mean to defend Mr. Gladstone—it would be an impertinence on my part—but as I had in the same number of the Review some notions on the subject of the extension of Austria, and assumed that the object of the two-headed eagle was (as all the world knows that it is) to go to the Aegean and absorb all the minor nationalities and branches of nationalities between, I take the opportunity of recurring to the subject to point out that until Mr. Gladstone took up the subject and came into a position to make his views on

the subject important to Austria and Europe, no Austrian official ever cared to disguise the general intention of all that was official in Austria, of assuming the heirship of Turkey, and annexing those provinces. * * * An Austrian official, who has been employed in all the late Balkan operations, said to me in 1876: 'We may leave Montenegro independent, but we must put a girdle around it,' i. e., enclose it in Austrian territory. No one who has been in intercourse with Austrian officials for the last 50 years can have a shadow of doubt that Austria did intend and does still intend to go to Salonica, and, if possible, to Constantinople. Austria never renounces. And my prevision that Austria would absorb the Balkan Slav States was based on the reasonable conviction that England would, under a Conservative auspices, remain, as she had been, the contented tail of the Bismarckian-bureaucracy combination—a position which effectually secured the subjugation of all the Balkans by the said combination. The accession of Mr. Gladstone and the successful carrying out of his policy ought to insure that if Austria goes farther it will be as the head of a confederation of independent States, but no longer either as empire or bureaucracy. Such a solution would remove the greatest danger which threatens the peace of Europe."

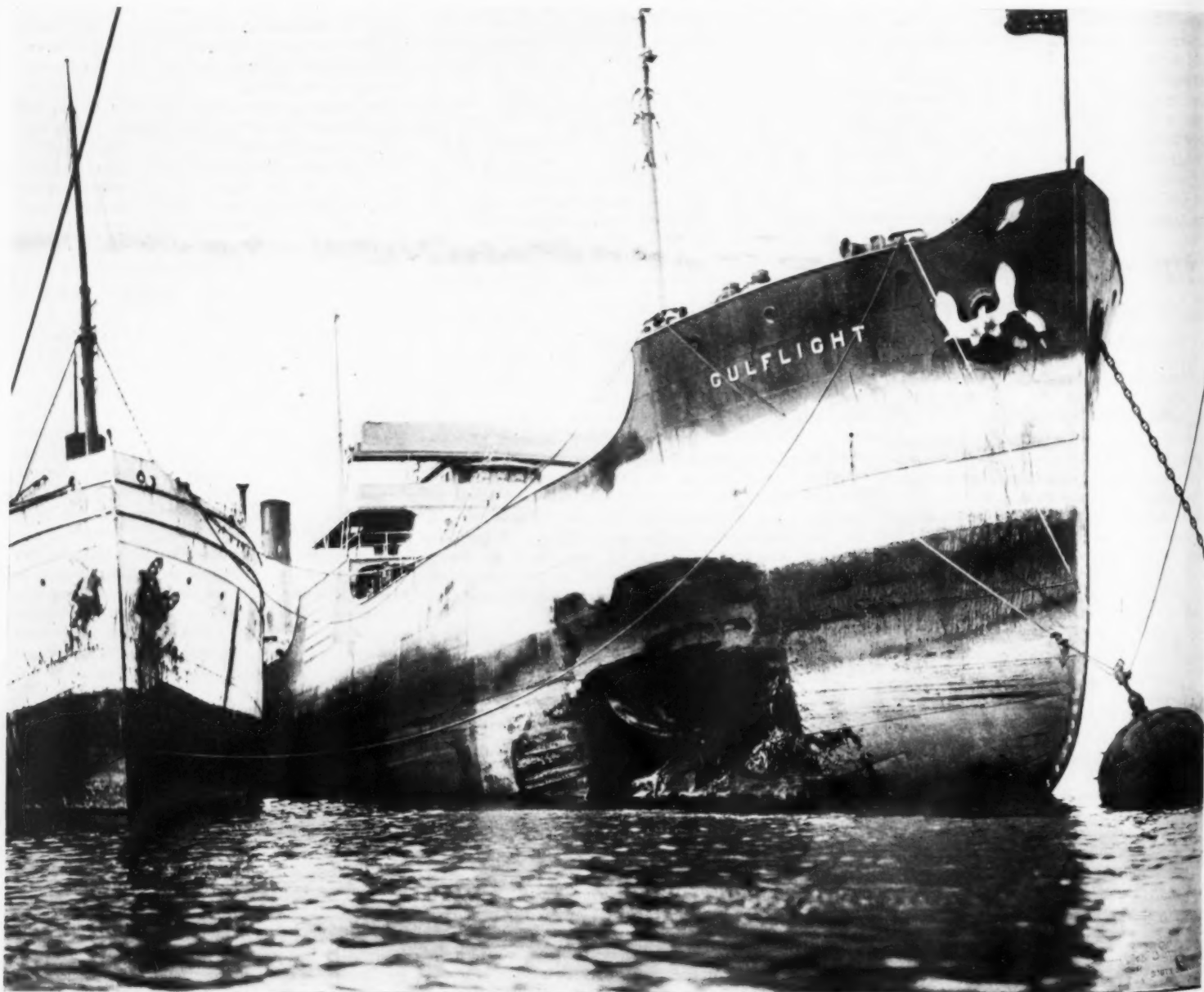
The purpose of this essay is to show that militarism

has been, is now, and ever will be the greatest menace to the peace of the world and the progress of liberalism. There can be no peace until the monster has been crushed to the earth to rise no more. The theory advanced in some quarters, that the United States in the interest of peace should put an embargo upon the shipment of munitions of war abroad is an indirect way of making this country lend its aid to the Austro-German alliance against the Allies. I have shown that the war in Europe is a contest between militarism and democracy. The foe of Germany is not France, nor England, nor Russia, but democracy, and should Germany triumph American democracy will have no opportunity to offer her kind offices to heal up the wounds of the nations nor prepare for her own defense, for German militarism will strike speedily, and the blow will come as swift and as terrible as a thunderbolt.

"Sound statesmanship," says a writer in the *Edinburgh Review* for 1881, "is an eminently practical craft. It deals with the desirable and the feasible; the possible barely enters its calculations, and upon the impossible it wastes no thought."

The hour has come when American statesmanship should prove itself an "eminently practical craft," ceasing to waste thought upon the impossible and deal only with the feasible.

THE GULFLIGHT AS HIT BY TORPEDO.



STEAMSHIP GULFLIGHT AS SHE ARRIVED IN THE TYNE SHORTLY AFTER BEING TORPEDOED.

Some idea of the destructive force of a submarine torpedo thrust may be formed from an inspection of the photographs herewith of a boat that was only struck, not damaged sufficiently to be sunk.

The photographs were taken at Newcastle-on-Tyne,

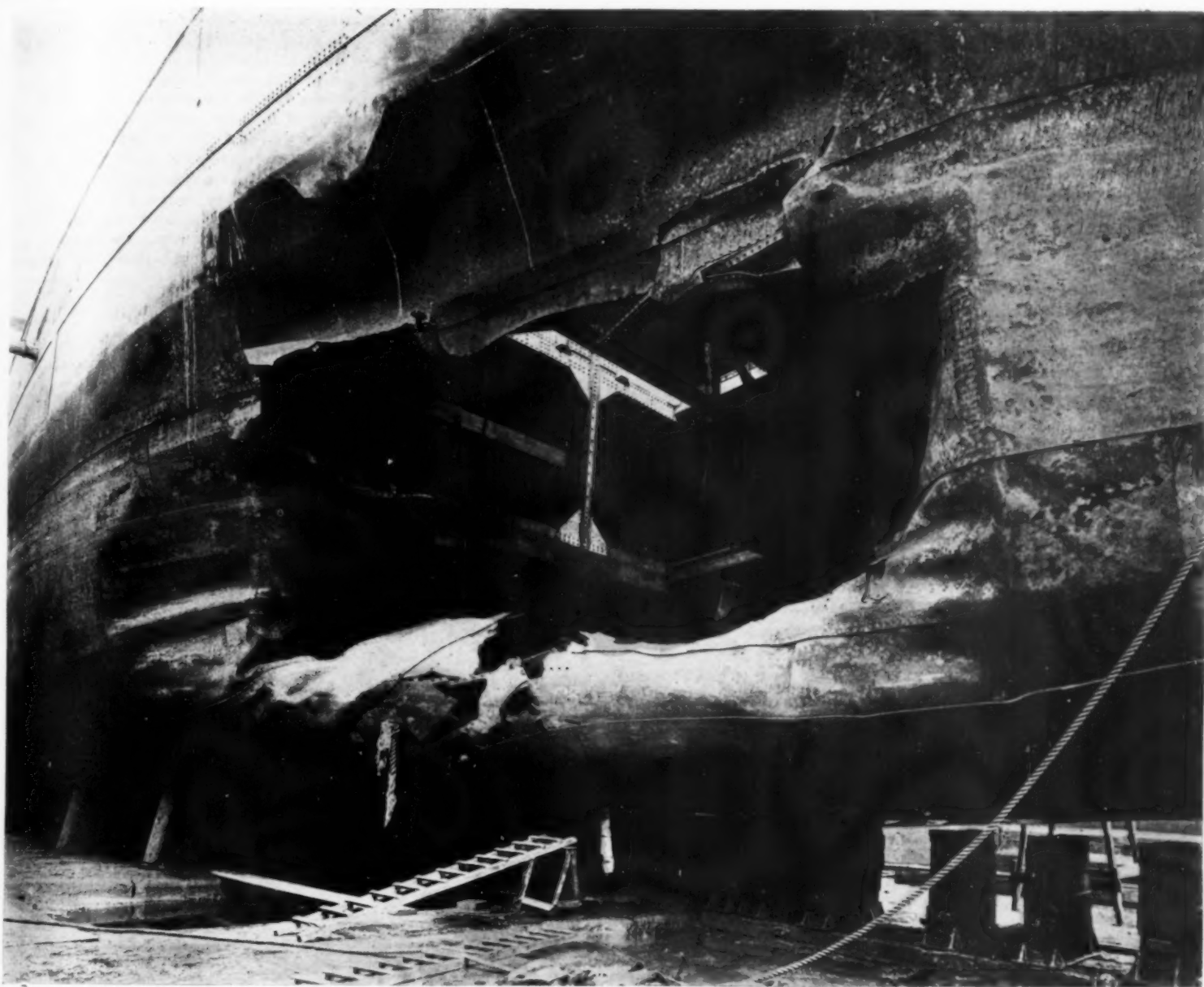
under the direction of Mr. James Kennedy, marine superintendent of the Gulf Refining Co. of Pittsburgh, owners of the boat. Mr. Kennedy went to England to supervise the repairing of the steamer, and while there had some illuminating photographs taken of the damage done.

The Gulfight sailed from Port Arthur, Tex., April 10 for Rouen, France, with a full cargo of 50,000 barrels of gasoline. She was torpedoed by a German submarine May 1 off the Scilly Islands. She was towed into an island port, where part of her cargo was discharged into lighters. She then proceeded, under her

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NEAR VIEW OF THE DAMAGE TO THE GULFLIGHT, TAKEN AFTER THE VESSEL WAS ON DRYDOCK AND BEFORE REPAIRS WERE COMMENCED.

own steam, to Rouen, France, her original destination, where the balance of the cargo was discharged. Thence the boat steamed to Newcastle-on-Tyne, where she was placed on drydock and repaired. The Gulfight was out of commission for five months. She arrived at Port Arthur Sunday, September 12, and is now plying her

regular trade between Port Arthur, Tex., and North Atlantic ports.

The Gulf Refining Co., which owns the Gulfight and is claimed to be the largest independent refining company in the world, is controlled by the Mellon banking interests of Pittsburgh, Pa.

The torpedoing of this steamer antedated by several days the destruction of the Lusitania. It was made the occasion for vigorous protests by this Government, as Capt. Alfred Gunther, the wireless operator and an able seaman, all Americans, were victims of the torpedoing of the Gulfight.

Exposition of America's Chemical Industries.

For the first time in the history of the country, the work and products of the chemical industries of the United States were comprehensively placed before the public at the first National Exposition of Chemical Industries, held in New York last week.

The European war, shutting off many of the chemicals and supplies which have been furnished largely by Germany, centered special interest in this exposition and the possibilities of chemical industries being established in this country to meet the situation.

One of the main purposes of this exposition was to emphasize our wonderful supply of raw materials, needed for every class of chemical manufacture, and to endeavor to point the way for the establishment of more of these industries. Among the features of the exposition were exhibits covering the manufacture of aniline dyes, beads, hard rubber, pyrometers, phenolic condensation and chlorine substitution products, vacuum drying, seamless open-piece products, bakelite, sulphur burners, quartz thermometers, filters, enameled ironware, acetphenetidin, caffeine, chloral hydrate, saccharin, distilling, centrifugals, zinc, South American possibilities, X-rays, the manufacture of chocolate, dynamite farming, potash, asphalt, explosives, gases and other products of a wide range.

In conjunction with the exposition there were given

a number of lectures and motion pictures, explaining and showing to the general public matters pertaining to all branches of various chemical industries. Among those furnishing papers during the exhibit were:

Howard H. Gross, president Tariff Commission League; D. T. Pierce, Barber Asphalt Co.; Harrington Emerson, the Emerson Company; Welding Ring, president American Exporters' Association; Dr. Thos. H. Norton, Department of Commerce; I. F. Stone, president National Aniline & Chemical Co.; G. B. Heckel, New Jersey Zinc Co.; Geo. Frank Lord, Du Pont de Nemours Powder Co.; Percy Wilson, secretary Association American Portland Cement Manufacturers; Dr. W. D. Coolidge, General Electric Co.; Philip Sharpless, Barrett Manufacturing Co.; Raymond F. Bacon, director Mellon Institute; Chas. V. Bacon, consulting chemist; M. A. Williamson of Norton Company; D. S. Collins, Kieselguhr Company of America, and John Barrett, director Pan-American Union.

Various associations co-operated in making the exposition a success, these including the American Electrochemical Society, American Chemical Society, American Institute of Mining Engineers, American Institute of Electrical Engineers, American Paper and Pulp Association (technical section), and the Bureau of Commercial Economics.

In handling the details of the exposition the management received the co-operation of an advisory commit-

tee, which included Raymond F. Bacon, director Mellon Institute; Chas. H. Herty, president American Chemical Society; Henry B. Faber, A. D. Little, R. P. Perry, William Cooper Proctor of the Proctor & Gamble Company; E. F. Roeber, editor Metallurgical Journal, Geo. D. Rosengarten, president American Institute of Chemical Engineers; T. B. Wagner, Corn Products Refining Co., and Utley Wedge of the Tennessee Copper Co.

A Big By-Product Coke Plant in West Virginia

The H. Koppers Company of Pittsburgh, writing the MANUFACTURERS RECORD about its contract for the by-product coke plant for the La Belle Iron Works, Steubenville, O., in West Virginia directly across the Ohio River from Steubenville, says: "This plant will consist of 94 Koppers Cross-Regenerative By-Product Coke Ovens with a capacity of 1000 tons coke per day. The By-Product plant will recover ammonia in the form of ammonium sulphate, tar, benzol, and will save for use in the steel mills about one-half of the gas produced by the coal. The contract includes all necessary foundations, coke ovens, by-product plant, benzol recovery apparatus, storage tanks, boiler plant, office laboratory building, machine shops, men's service building, store-room, water tower, fire protection and coal and coke-handling equipment."

Gulf, Florida and Alabama Railway's New Coal Pier at Pensacola

The coal pier of the Gulf, Florida & Alabama Railway at Pensacola is shown in the accompanying illustration as it will appear when finished. Construction has not yet actually begun on the pier itself, but the coal-loading machinery with which it will be equipped is being built, and will require four or five months to complete. Meanwhile, the pier will be erected, and is to be in readiness for the loading plant when it is received. The Link-Belt Company of Chicago and Philadelphia is making this machinery.

The plant will consist, in part, of a tower 90 feet high from which three conveyors will be operated by

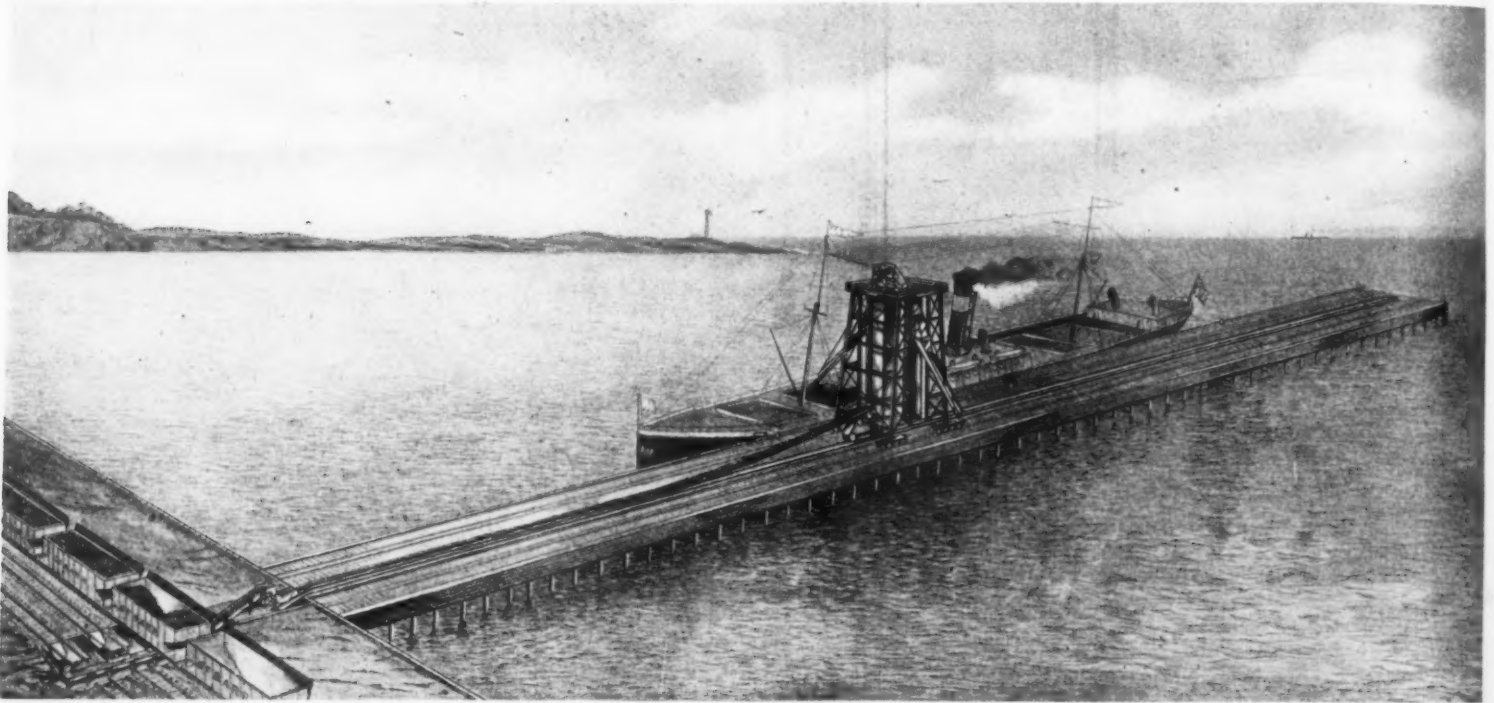
electricity. One of them, a chain-bucket type of conveyor, is to run below the three railroad tracks back of the bulkhead, as shown in the picture. The conveyor, which runs the entire length of the pier, 600 feet, is a rubber and fabric belt type, protected by sectional covering, and it will receive the coal from the chain conveyor near the bulkhead. The coal will be discharged from the belt onto a vertical chain-bucket elevator in the tower, and then from it into the chutes on either side, as also indicated by the illustration.

It will be possible to shift the chutes at any angle and to raise or lower them, as necessary. The trucks

supporting the tower will rest on rails, and it can thus be quickly moved forward or back on the pier, all these movements being accomplished by the use of electric power. The operator controlling the movements of the tower and the conveyors will occupy a cab at the summit of the tower, where everything connected with the operation of the pier will be in view.

This installation will be the first unit of the pier, and its capacity as here described and pictured will be 600 tons per hour, but by the installation of two additional units the capacity of this single tower can be increased to 1800 tons per hour. By the use of the three tracks over the receiving hoppers at the bulkhead on which loaded cars can be placed there is absolutely no time lost by the switching of loaded cars to replace those which have been emptied of their contents.

The new pier will be of great advantage to all vessels loading either bunker or cargo coal.



GULF, FLORIDA & ALABAMA RAILWAY COAL PIER AT PENSACOLA.

EDUCATIONAL VALUE OF FOUNDRY- MEN'S CONVENTION.

[Special Dispatch to Manufacturers Record.]

Atlantic City, September 28.

The twentieth annual convention of the American Foundrymen's Association formally opened its doors this morning, with registration headquarters and exhibit halls in Young's Million-Dollar Pier; convention headquarters at Traymore Hotel. The attendance is already exceptionally good, the Northern, Eastern, Southern and Western foundries being in evidence in representative numbers.

The exhibits furnished by the large manufacturers of foundry raw materials, foundry equipment and accessories are on a large and comprehensive scale. The large and representative manufacturers and handlers of pig-iron, coke, alloys, molding machines, grinders, compressors, cupolas and accessories, sand blast machines, foundry shoes, goggles, foundry supplies, etc., have attractive booths, with a full corps of technical and enthusiastic attendants. A baby electric steel converter is in operation, demonstrating the possibilities of the steel converter for foundry use. Many types of labor-saving devices are practically and efficiently demonstrated, and there are new and helpful ideas advanced which are of exceptional value to the foundry trade in general.

Of course, there are many devices demonstrated which are of particular interest and advantage to the large foundries of all sections. Yet the ideas advanced and put in practice would be decidedly to the interest of the small foundrymen.

Any improvement effected in a foundry of any size is bound to have its effect on the cost of a casting.

The writer, being particularly familiar with Southern foundry conditions, has had his "eyes opened" in the matter of improved methods at the disposal of the foundrymen in the South. The expenses of a visit to a convention of this character by the practical man in the foundry would be an investment worth many times the monetary value to his employer. Any practical molder or foundryman who attends a convention of this kind and returns home without having stored in his mind and memorandum book a wealth of practical ideas (and then does not put them into effect at his plant) is indeed a poor foundryman and a bad judge of advanced ideas and conditions.

The American Foundrymen's Association is not a sectional organization; therefore one striking lack of interest is manifestly in evidence—that is, the relatively few Southern foundrymen on hand up to date, and no exhibits displaying manufactured products from the South for the foundrymen. Every furnace and steel interest in the Birmingham district, and every foundry coke producer, should have had an exhibit at the convention, with competent salesmen to demonstrate the product, and at least 75 per cent. of the foundry interests should be on hand to meet in person these salesmen and learn of the merits of their products and get better acquainted, in order that there may be a better and more brotherly understanding between Southern producers and buyers.

The foundry interests represented, in speaking of general business conditions in their respective sections, state that, while the volume is not exceptionally large, the average is good, and their heats range from three days a week to full time. Within the past 30 days there has been a very noticeable increase in general lines of work, and especially in the sawmill sections of the South.

The convention will be in session from the 28th of

September up to and including October 1, and the business sessions promise to be of exceptional interest to the foundrymen, as many new and instructive questions will be dealt with and discussed before the convention.

Y. A. DYER.

Baltimore to Build a \$500,000 Armory.

The Building Commission of the Fourth Regiment of Maryland National Guard, Harry C. Jones, chairman, Chamber of Commerce Building, and Major Albert S. Gill, secretary, 215 St. Paul street, both of Baltimore, will receive, through Major Gill, until December 1 competitive drawings for an armory to be erected at North and Maryland avenues, Baltimore. For this building the State Legislature will be petitioned for an appropriation to cover the estimated cost of \$500,000. The building will contain all the most modern features for armories, and will occupy site 230x303 feet. A drill hall with a minimum of 50,000 square feet of floor space is provided for in the requirements. Each competitor will be allowed to submit only one design.

To Knit Seamless Hosiery.

A daily capacity of 200 dozen pairs of seamless hosiery is planned for a knitting mill to be built at Hendersonville, N. C., by James P. Grey & Son. The mill building will be of brick, with stone foundation, 80x50 feet, while the dyehouse will be of frame, with stone foundation, 76x22 feet. From 30 to 40 knitting machines, small unit electric motors, etc., costing about \$6000, will be installed. J. E. Serrine, Greenville, S. C., is the architect and engineer in charge.

Jackson Highway Association Permanently Organized

WELL ATTENDED MEETING IN NASHVILLE SELECTS PORTIONS OF OFFICIAL ROUTE FROM CHICAGO AND BUFFALO TO NASHVILLE AND APPOINTS COMMITTEE TO RECOMMEND ROUTE FROM NASHVILLE TO NEW ORLEANS.

[Special Correspondence Manufacturers Record.]

Nashville, Tenn., September 25.

Approximately 2000 delegates, filled with enthusiasm for their respective routes and for the Jackson Highway Association as a whole, invaded Nashville this week and were in session at the Orpheum Theater, Thursday and Friday, effecting a permanent organization and arranging for the selection of a permanent highway from Chicago to Louisville on the northwest and from Buffalo to Louisville on the northeast, and converging at Louisville in a road from that point to New Orleans via Nashville and over a route yet undecided. Although good-road boosters came with blood in their eyes, so to speak, to fight every move to deter the route from their particular city or town, the greatest harmony prevailed, as all realized the first importance of the project and all agreed that the great Jackson Highway must be built.

The greatest contest staged during the convention was between the Alabama and Mississippi delegates. There were a few other small contests between some of the smaller towns on both of the proposed routes over some possible deviations if the route came that way, but they figured very little in the general meetings. The Mississippi delegation, strongly reinforced by the Northwestern Alabama delegation, claimed that the route should take the road cut out by Andrew

Jackson in 1815 through that corner of Alabama, through Mississippi and into New Orleans. The Alabama contingent proper, recruited for the most part from the good-road boosters of The Decatur, Huntsville, Cullman, Birmingham, Montgomery and Mobile, claimed that the route should be designated via the places mentioned to New Orleans by reason of their population, good roads and the good condition in which they will be kept.

Neither of these routes, however, were selected at the meeting, as that will be left to the board of directors of the Jackson Highway Association, which will meet in Nashville, at the Hermitage Hotel, November 10. This was decided at a meeting of the board yesterday afternoon. At that time the route as a whole will be determined, the decision to rest with members of the board from Louisiana, Indiana, Ohio, Kentucky, Pennsylvania and New York, where there is no contest over the route, the members from Mississippi, Alabama and Tennessee not participating. The decision, therefore, will come from neutral sources.

Members of this board from non-contesting States already selected are W. H. Crim, Salem, Ind.; E. G. Dent, Scottsville, Ky.; W. L. Brown, Frankfort, Ind., and a man from Ohio, which will be selected later by President Peter Lee Atherton.

Preparatory to the meeting in November a path-finding committee, composed of a Government engineer and three board members from neutral territory, will make a circuit trip from Nashville to New Orleans via the Mississippi route and return to Nashville by the Alabama route, and will be ready to make a report and recommendations to the directors for final decision. The pathfinding committee, however, will virtually settle the question of the permanent route. All counties that are in the contest will have to compile and furnish data covering the claims made, and this will have to be filed not later than October 20 at the headquarters of the association, which for the present will be located in Louisville, the home of the president.

It will be the custom from now on to have the association headquarters at the home of the president. No secretary or engineer has been selected as yet, and will not be until the board of directors has its meeting here, a route selected and the permanent organization effected in every detail.

The board of directors at its initial meeting held yesterday afternoon officially routed the Jackson Highway from Chicago to Louisville, thereby designating permanently the northwestern branch of the highway and from Maysville, Ky., on the Ohio River, to Louisville. The route from Louisville to Nashville was also adopted. Though the organization has not as yet been effected to carry the route on through Ohio, Pennsylvania and into Buffalo, the route from Maysville will probably go by Columbus and Cleveland, O.; Erie, Pa., and to Buffalo. The board authorized the executive committee to effect organizations in the States and counties through which it will pass from Maysville to the northeast.

"After the November meeting," said President Atherton, "when we expect to get everything down to a strictly business basis and a permanent working organization, we propose to organize a permanent auxiliary committee in every county to carry on the work



1.—Chert road in Jefferson county, near Birmingham, Ala. (Alabama Route.)
2.—Portion of ten 20-foot spans concrete viaduct on Mobile road. (Alabama Route.)
3.—Hayneville road, near the Legrand, Montgomery county, Alabama. (Alabama Route.)
4.—New route over famous Monte Sano Mountain, near Huntsville, Ala. (Alabama Route.)

5.—Eliminating grade crossing in Chilton county, Alabama. (Alabama Route.)
6.—Carter Hill road, Montgomery county, Alabama. (Alabama Route.)
7.—Tennessee River Bridge, Florence, Ala. Only highway bridge crossing the river west of Chattanooga. (Mississippi Route.)

on that particular stretch of the road. It is our hope that within a year from the date the Jackson Highway Association is permanently organized that every mile of the road between Chicago and Louisville, Buffalo and Louisville and from Louisville to New Orleans will be constructed upon substantial lines, and that it will be kept in that condition. The delegates present have promised us that this will, as far as practicable, be realized within that time.

"When the route to New Orleans has been established, we have still another scheme up our sleeve, and that is to build a road like the proposed Jackson Highway will be from New Orleans, where it will connect with Jackson, to San Diego, Cal. This, however, we will not attempt to take up until the Jackson Highway is an established monument to the great man whose name it bears."

The Alabama delegation to the convention made an imposing appearance, with their large numbers of boosters, who wore Alabama streamers and other indications of the State from which they came and the cause they were to champion. Two of their number were conspicuous by the unique manner in which they advertised their proposed route. Those two wore khaki coats with the route traced down their backs and the names of the stopping places painted in black letters.

Speaking of the possibilities of the Alabama route, W. S. Keller, the Alabama State Highway Engineer, said:

"The Alabama route as proposed by our delegation has first of all, a greater amount of population and the largest cities. Three-fourths of the roads on the route we are advocating are already built, and we promise to have the rest of it ready within a year after our route has been selected.

"Alabama has the first State highway department to be established south of Virginia. It was formed four and a half years ago, and since then the mileage of permanent roads has been increased over 92 per cent."

The Mississippi delegation, augmented by the Northwestern Alabama representation, were conspicuous by their numbers and adornments. Each was tagged with a red tag, on which a telling argument for the Mississippi was briefed. Each of these delegates carried a hickory walking stick, to which a pennant was tied. It read: "Jackson Military Highway Over the Florence Bridge, 200 Miles Shorter; The Historical Route." As the Mississippi people played up the historical feature of their argument, the hickory sticks typified "Old Hickory," and they had a telling effect when the delegates were applauding their claim-making delegate. Speaking of the claims made for the Mississippi route, Travis Williams of Russellville, Ala., who presented one of the two gavels offered to President Atherton at the Friday morning session, said, in part:

"We of North Alabama and Mississippi are presenting our claims for this highway route on its historical basis. We are to have an Andrew Jackson Highway, and, according to our belief, that highway should follow the trail Andrew Jackson blazed over a century ago and later cut out, graded the roads and built bridges through to New Orleans. So important was this route, according to his way of thinking, as a war measure, he was able to secure from Congress an appropriation of \$300,000 to do this work.

"In addition to this very important point we have a route 220 miles shorter than any other contestant—the 'bee line,' in fact.

"There are only three rivers to cross, and they already have permanent bridges over them. And when we get into Louisiana our route goes around the beautiful lakes in that section into New Orleans. We will also promise to see that all roads that are not now in the shape the board of directors would like are constructed at once to conform with the standard of the highway as a whole."

Senator Oscar W. Underwood of Alabama, Mayor Behrman of New Orleans, Governor-elect Theo. Bilbo of Mississippi, Ex-Governor Emmett O'Neal of Alabama, Governor Tom C. Rye of Tennessee and many other prominent men from all parts of the South were present at the convention and addressed the assemblage pertaining to various phases of the Jackson Highway Association.

The following officers of the association were elected: Peter Lee Atherton, president, Louisville, Ky.; J. G. Creveling, Jr., vice-president, Nashville, Tenn.

State vice-presidents and committeemen:

Indiana—Vice-president to be named later. Com-

mitteemen—W. H. Crim, Salem; W. H. Lincoln, Columbus; W. L. Brown, Frankfort.

Kentucky—Vice-president, Edmund H. Taylor, Frankfort. Committeemen—Ed. L. Quarles, Lexington; Emory G. Dent, Scottsville; L. B. Samuels, Bardstown.

Tennessee—Vice-President, Ben Childers, Pulaski. Committeemen—Judge Higgins, Fayetteville; J. J. Gray, Jr., Mt. Pleasant; W. S. Schamberger, Gallatin.

Alabama—Vice-president, R. E. Spraggins, Huntsville. Committeemen—W. L. Irvine, Mobile; W. T. Saunders, Athens; R. T. Simpson, Florence.

Mississippi—Vice-president, J. M. McBeath, Meridian. Committeemen—Thomas J. Lock, Jr., Columbus; W. B. Potts, Kosciusko; E. B. Dunton, Pascagoula.

Louisiana—Vice-president, T. C. Campbell, New Orleans. Committeemen—P. M. Milner, New Orleans; C. H. Ellis, New Orleans; Joseph Schwartz, New Orleans.

ROY G. BOOKER.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Lufkin, Tex.—Angelina county voted \$200,000 bonds to construct roads.

Morgantown, W. Va.—Monongalia county, Morgan district, voted \$300,000 bonds for road improvements.

Oberlin, La.—Allen parish voted \$150,000 bonds to construct gravel roads in Ward 5.

Savannah, Ga.—Chatham county voted \$375,000 bonds for road construction.

St. Andrew, Fla.—City voted \$24,000 bonds for street improvements, etc.

Tallahassee, Fla.—Leon county voted \$200,000 bonds to construct roads.

Bonds to Be Voted.

Batesville, Tex.—Zavalia county will order election on issue of additional \$15,000 bonds for road construction.

Buckhannon, W. Va.—Upshur county votes December 30 on \$250,000 bonds to construct roads.

Crittenden, Ky.—City votes September 30 on \$1000 bonds to improve roads.

Donaldson, La.—Ascension parish votes October 19 on \$50,000 bonds to construct roads in District No. 1 and \$15,000 bonds to construct roads in District No. 2.

Hillsboro, Mo.—Jefferson county will vote on \$500,000 bonds to construct roads, etc.

Lonsdale, Sta. No. 7, Knoxville, Tenn.—City votes October 30 on \$30,000 bonds for street paving, etc.

Sapulpa, Okla.—Creek county votes October 2 on \$18,000 bonds to construct roads.

Somerset, Ky.—Pulaski county votes December 18 on \$300,000 bonds to construct roads.

Contracts Awarded.

Annapolis, Md.—Anne Arundel county awarded contract for 4200 feet of State-aid roadway in Fifth District.

Clearwater, Fla.—City awarded \$6087 contract to construct concrete curb and gutter and sand-filler brick pavement.

Carlisle, Ky.—Nicholas county awarded \$35,000 contracts for road construction.

Coushatta, La.—State awarded \$14,900 contract for 8 miles of road in Red River parish.

Elizabethton, Tenn.—Carter county awarded contract to construct 65 miles of roads.

Kansas City, Mo.—City awarded \$38,750 contracts for asphaltic concrete and sheet asphalt paving.

Louisville, Ky.—City awarded \$38,750 paving contracts.

Memphis, Tenn.—City awarded \$9011 contract to pave 5650 square yards with concrete.

Meridian, Miss.—City awarded \$8000 contract for curbing and guttering.

Poteau, Okla.—City awarded \$15,768 contract for concrete street paving.

San Antonio, Tex.—City awarded \$9200 contract to pave streets with Uvalde rock asphalt.

Tarpon Springs, Fla.—City awarded contract for 100,000 square feet concrete sidewalks; cost \$15,000.

Taylor, Tex.—City awarded contract for 120,000 square yards street paving to cost \$275,000.

Whitesburg, Ky.—Letcher county awarded contract for 1½ miles of road.

Winter Park, Fla.—City awarded contract for brick pavement to cost \$6000.

Contracts to Be Awarded.

Atlanta, Ga.—Southeastern Fair Association will construct one mile of speedway around lake.

Athens, Tex.—City will improve streets, to include claying, graveling, concrete guttering and curbing; cost \$15,000.

Easton, Md.—Talbot county receives bids until October 5 to construct section of State-aid highway; 1800 feet; concrete, macadam or shell construction.

Green Cove Springs, Fla.—Clay county receives bids until October 6 to construct 30 miles of road.

Hagerstown, Md.—Washington county receives bids until October 5 to construct 2.99 miles of State-aid highway.

Kaufman, Tex.—Kaufman county, Terrell Road District, receives bids until October 28 to construct gravel-macadam roads; estimated cost, \$200,000.

Newport, Tenn.—Coke county receives bids until October 16 to grade and macadamize roads, expending \$150,900.

Pensacola, Fla.—City receives bids until October 17 to construct about 4000 square yards pavement and 1500 linear feet concrete curb.

Pawnee, Okla.—City receives bids until October 4 to construct 20,000 square yards of paving in business district.

Salisbury, Md.—Wicomico county receives bids until October 12 to construct 2-mile section of State-aid highway.

Eastern Kentucky Awards Road Contracts.

Whitesburg, Ky., Sept. 25—[Special].—The real beginning of a good roads campaign was launched here yesterday, when the Letcher Fiscal Court let contracts for several miles of good roads leading out from this city in several directions. J. J. Brady, a contractor of Jackson, Ala., was awarded the contract on a mile and a half leading from Whitesburg toward mouth of Colly Creek, which is to be built by State aid, this being the first piece of road in which the State appropriated aid to be built in the Eastern Kentucky coal fields. This aid came about through the persistent efforts of County Judge Henry T. Day and the members of the Fiscal Court, who prevailed upon the State Department to start the work in the new Kentucky coal fields. Owing to the large increase in population and the extensive development work under way, the development of the vast coal and timber wealth, they insisted, made it the more imperative that this section receive State aid.

This will be the beginning of a great amount of road-building to be done by the State throughout this rapidly-developing section, as a number of counties, including Perry, Knott, Pike, Harlan, Leslie, Breathitt, Lee and Powell, are likely to vote bonds necessary to get this aid from the State.

The Letcher Fiscal Court here yesterday also awarded contracts to Nat Hale of Colson, Ky., for the construction of a good-sized stretch of model roadway in the vicinity of Kona Station on the Louisville & Nashville Railroad above here, forming a connection with the five-mile section recently built between Mayking and Kona. The work on all the road-building in the county is to start off immediately, so as to gain as much headway as possible before the advent of bad weather.

Eastern Kentucky, including Bell, Knox, Whitley and Laurel, which have already voted bonds, will spend several million dollars in good-road building within the next few months, the work in these counties having already gained much headway. Other counties are falling into line with the work—others with the enthusiasm and determination that is sure to result in a system of good roadways for the near future.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

\$1,800,000 FOR NORFOLK TERMINALS.

Piers and Warehouses to Be Built by Norfolk & Western Railway.

Two large piers and warehouses to cost about \$1,800,000 will be built at Lambert's Point, Norfolk, Va., by the Norfolk & Western Railway, and work upon the improvement is to begin immediately. One of the piers, which will handle south-bound coastwise freight, will be 1200 feet long, and the other, for north-bound freight, will be 800 feet long. Each will be 220 feet wide. The warehouses will be on the piers, which will extend far out into the harbor, and will have berths for vessels on each side. There will be three or four railroad tracks on each side of the piers, so that cars can run on them for loading or unloading, as desired. The buildings on the piers will be of steel construction, with flat, built-up roofs, designed by the railroad company's engineers. Caissoned piles and timber will be used in the construction. Bids for the work have not yet been asked.

The site chosen for the piers is immediately west of Lambert's Creek and adjoining the property of the Old Dominion Steamship Co. They will be connected with the Lambert Point yards by direct tracks. The first work to be done will be dredging on the site of the piers, and perhaps more than 1,000,000 cubic yards of material will have to be removed.

Construction of the contemplated new grain elevator is deferred by the railroad company, President L. E. Johnson having told the Chamber of Commerce that the company is convinced that the proposed expenditures will be more beneficial to the city than would the building of an elevator, and when the improvements now outlined are completed the congestion now experienced at Wide Water street will not only be almost wholly eliminated, but the railroad will be able to handle more coastwise business through Norfolk than heretofore.

According to a report from Norfolk, the opinion is entertained that this expenditure by the Norfolk & Western Railway is only the first step in a series of improvements to be made on the waterfront by the railroads and steamship companies on the Norfolk side of the Elizabeth River between the cotton warehouses at Atlantic City and Sewalls Point. More piers are expected to be built and other facilities constructed for handling a large freight business. It is believed that a grain elevator will be assured by the increasing development of the agricultural resources of the South.

Katy Road in Receiver's Hands.

Expectations that the Missouri, Kansas & Texas Railway would be placed in a receivership have been realized in the United States Court at St. Louis, where Judge Adams has appointed President C. E. Schaff to be receiver. He was also appointed receiver for the company in Texas by the Federal Court at Dallas, there being a separate incorporation for the road in that State. The application for the receiver was made on behalf of the Railway Steel Spring Co. of New Jersey, which held a claim for \$16,609, and of D. B. Hussey, a tie contractor, whose claim was for \$120,018. The general counsel for the railroad has been appointed counsel for the receiver.

On May 1 last the company failed to pay \$19,000,000 of its notes at their maturity, but a large majority of the holders consented to an extension for a year, although others sued and obtained attachments, it is stated. It was then proposed to reorganize the company, but the course of the road's securities in the market reflected opinion concerning it unfavorably, so that the receivership was foreshadowed.

The floods of last year and the year before did great damage to the property, as did the Galveston flood of this year. Coupled with these losses came poor business and hastened the outcome. A report from New York indicates that Hallgarten & Co. and J. & W. Seligman & Co. have been working on a reorganization

plan and have made such progress that, notwithstanding the receivership, it will soon be ready for submission to the several interests in the system.

The Missouri, Kansas & Texas Railway is one of the properties which the late Edwin Hawley added to his list of railroad interests not long before he died. Three of the directors now represent the estate. Stuyvesant Fish and E. R. Tinker, Jr., are also concerned in the road. Protective committees are being formed for the securities.

Recent reports of earnings show that the operating revenues have been running behind last year. Figures from July 1 to the second week of September show gross \$6,219,767, or approximately \$400,000 less than for the same period of 1914.

The Missouri, Kansas & Texas Railway Co. operates a total of 3865 miles of line, and it extends from St. Louis to Kansas City, Oklahoma City, Dallas, Fort Worth, Waco, Houston, Galveston, San Antonio and Shreveport, besides to many other points in Missouri, Kansas, Oklahoma, Texas and Louisiana.

PETERSBURG TO CITY POINT.

Rapid Progress on Construction of Electric Railway to Hopewell, Etc.

President T. M. Wortham of the Petersburg & Appomattox Railway, Richmond, Va., says that a large force has been at work for nearly a month on the line, which will run from Petersburg to Hopewell, City Point and Deepwater, approximately 10 1/4 miles, and that about four miles of the right of way has been graded and five miles more cleared ready for the grading. As the work is light, it is confidently believed that the line will be in operation by November 15. The Vaughan Construction Co. of Roanoke and Petersburg is the contractor.

At present there is a jitney service between Petersburg and Hopewell, but the highway between the two places is a dirt road, and better facilities are required to afford adequate transportation facilities for the large population at City Point and vicinity, which has increased tremendously since the Dupont company established its large powder plant at Hopewell. The new railway is to be equipped with electric cars, which are to connect with the electric cars running from Petersburg to Richmond. The schedule time from City Point and Hopewell to Petersburg is to be 45 minutes, and it is estimated that the time from City Point through Richmond will be approximately an hour and a half if satisfactory transfer arrangements can be made with the Virginia Railway & Power Co.

The railway has a franchise for trolley car rights through Prince George county, Hopewell and City Point, and also has all necessary franchises in Petersburg, in which city its cars will run over part of the track of the Virginia Railway & Power Co. to the latter's terminal at Sycamore and Bolingbroke streets. That company will furnish power for the new road. It is contemplated to operate multiple unit equipment, with 1200 and 600 volts current between trolley and rail interchangeable. Operation will be easy, the maximum grade being 2 1/2 per cent, and only one small bridge or culvert will be required, besides an inexpensive overpass to cross the Norfolk & Western Railway's City Point branch. The road is particularly a home enterprise. All the capital was raised locally, and it is owned by people residing near its route.

General Statistics of Railroads.

The Bureau of Railway Economics, Washington, D. C., has published a summary of the revenues and expenses of steam roads in the United States for the fiscal year ended June 30, 1915, having annual operating revenues of more than \$1,000,000. It shows that their total operating revenues for the year were \$2,889,029,475, of which \$1,988,594,599 was from freight and \$630,177,652 from passenger traffic, the rest coming from mail, express and other business. Total operating expenses were \$2,032,689,894, of which \$1,017,797,060 was for conducting transportation, \$498,871,462 for maintenance of equipment and \$365,968,225 for maintenance of way and structures, and the rest for traffic, general expenses, etc. The total net operating revenue was \$856,339,581, the

latter being an increase of 1.8 per cent. as compared with the preceding year, although total operating revenues decreased 6.3 per cent., the good showing in net being accomplished by a decrease of expenses amounting to 9.3 per cent. Taxes were \$133,903,519, a decrease of 3 per cent., and uncollectible revenues were \$640,345, leaving the operating income at \$721,705,717, an increase of 2.6 per cent. Operating ratio was 70.4 per cent., as compared with 72.7 per cent. for the previous year. Total mileage of lines 228,554.

In the Southern District the total operating revenues per mile of line was \$10,019, which compares with \$12,641 for the entire country and with \$21,790 for the Eastern District and \$9282 for the Western District. Operating income for the Southern District was \$2253 per mile of line, less than in either of the other sections.

More Double-Track Contracts.

The Southern Railway Co. has recently let contracts for 34 miles of additional double-track construction on its main line between Washington and Danville. This work is as follows: Arrowhead to Elma, Va., 20 miles, to W. W. Boxley & Co. of Roanoke, Va.; Sycamore to Gretna, Va., 4 miles, to the Hall-Crawford Construction Co. of Macon, Ga.; Whittles to Dry Fork, Va., 9.7 miles, to Robert Russell of Danville, Va.

Recently the railroad put in service 13 miles of new construction from Danville northward to Dry Fork, this track leaving the old line about three miles, a detour being made over the Richmond division for a short distance and going thence to Dry Fork. It is said that finally a double track will be built along this new line, but for the present the track will be used by only north-bound trains, while southbound trains will continue to follow the old route, this making practically a double-tracked through line, although the new track is considerably removed from the other.

Sumter to Olanda.

Plans for the construction of a railroad from Sumter to Shiloh, Turbeville and Olanda, S. C., 32 miles, are being actively promoted by the Chamber of Commerce at Sumter, the managing secretary of that body being E. I. Reardon, who is also secretary of a committee which is in charge of survey, maps, right of way, depot sites, etc. D. D. Moise is chairman and G. A. Lemmon treasurer. The chief engineer is R. F. McLellan. Efforts are being made to interest capital in the proposition, which, it is claimed, would yield good returns upon the necessary investment.

The route is almost directly east from Sumter to Shiloh and Turbeville, and thence slightly northeast to Olanda. Connections at Sumter would be with the Atlantic Coast Line, the Southern Railway, the Seaboard Air Line and the Northwestern Railroad of South Carolina, while at Olanda connection would be made with the Alcolu Railway.

New Equipment.

Central of Georgia Railway will purchase about 12 locomotives and several passenger and express cars, this in addition to the freight equipment already decided upon.

Chesapeake & Ohio Railway has received from the American Locomotive Co. 4 large Mallet freight engines and has put them in service. More are coming.

Southern Car Co., High Point, N. C., is building 6 cars for the Corpus Christi (Tex.) Street Railway.

Southern Railway is reported in the market for 20,000 tons more of rails, and the Santa Fe, according to a market report, will also buy more.

Texas & Pacific Railway's locomotive order is for 7 Santa Fe type and 6 switching engines. They will be built by the Baldwin Locomotive Co., Philadelphia.

Petersburg & Appomattox Railway Co., which is building an electric railroad from Petersburg to City Point, Va., is reported to have ordered motor cars 50 feet long with Baldwin Locomotive Co. trucks and General Electric Co. equipment. They will seat 48 passengers.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Fla., Miami.—City voted bonds to construct 3 bridges over Miami River—\$75,000 for bridge at Ave. D, \$75,000 for bridge at 12th St., and \$25,000 for bridge at D St.; B. H. Klyce, City Engr. (See Miscellaneous Construction.)

Fla., Miami.—City applied to War Dept. for permission to construct causeway across Biscayne Bay; 105 ft. wide on top and 8 ft. above high tide in bay; estimated cost \$456,000; structure to be built from sand and rock dredged from ship channel to be constructed in Biscayne Bay, and will extend along north side of channel, few rods distant, describing diagonal course across bay from municipal dock site at 2d St. in Miami to Fifth St. in Miami Beach on peninsula; \$300,000 bond issue voted (see Miscellaneous Construction) to construct ship channel; plans by Isham Randolph, Harbor Engr., Chicago and Jacksonville; B. H. Klyce, City Engr. (Lately noted.)

Ga., Buena Vista.—Marion County Commissioners, N. L. Brown in charge, will erect 350-ft. bridge; construction begun.

Ga., Macon.—Central of Georgia Ry., C. K. Lawrence, Ch. Engr., Savannah, Ga., let contract Virginia Bridge & Iron Co., Roanoke, Va., at about \$80,000 to construct steel viaduct from Bay to 3d St.; require about 900 tons steel; concrete work estimated to cost \$5000 to \$6000.

Miss., Pascagoula.—Jackson County Supvrs. will construct trestle and bridge to replace ferry.

Mo., Hillsboro.—Jefferson county will vote on \$500,000 bonds to construct bridges and roads. Address County Commrs.

N. C., Greenville.—Pitt county will construct small steel bridge; wood floor, with concrete abutments on piling; County Commissioners, Brascoe Bell, Ch., receive bids until Oct. 4; W. C. Dresbach, Civil Engr., Greenville. (See Machinery Wanted—Bridge Construction.)

N. C., Salisbury.—Rowan County Commrs. will construct 22 steel bridges; receive bids Oct. 4; M. E. Miller, County Engr. (See Machinery Wanted—Bridges (Steel).)

Okla., Antlers.—Pushmataha County Commissioners will construct 5 steel bridges estimated to cost \$40,000; W. P. Danford, State

Highway Engr., approved plans and specifications.

Tenn., Chattanooga.—Southern Ry., W. H. Wells, Ch. Engr. Constr., Washington, D. C., is reported to construct bridge over tracks at Oak St.; cost \$10,000 to \$12,000.

Tenn., Chattanooga.—Hamilton county will build 2 earth, chert or gravel fills to north and south ends of Market-St. bridge across Tennessee River; north approach fill to contain about 16,500 cu. yds.; south approach, about 9000 cu. yds.; both fills to be built in 18-in. layers and rolled with 10-ton roller; Tennessee River Bridge Committee, Theo. F. King, Chmn., receives bids until Sept. 29; bids will be asked for making north approach fill or south approach fill separately, or contract for both may be let to same bidder. (See Machinery Wanted—Grading.)

Tex., Estelline.—Hall County Commrs. let contract to Austin Bros., Dallas, Tex., at \$13,000 to construct bridge across Red River; structure 2574 ft. long; creosoted piling.

Tex., Galveston.—Bartholow-Willits Engineering Co. and Hoskins Foster submitted proposition to County Commrs. to construct wagon bridge across bay to supply needed accommodations pending reconstruction of causeway; proposition is that such use be made of archway and other portions of old causeway as can be utilized and other links be supplied by wooden bridge.

Tex., Rockport.—Aransas County Commrs. will issue \$300,000 bonds to construct causeway connecting peninsula at Rockport with main land at La Mar; Whiteaker & Washington, Civil Engrs., San Antonio, Tex., designers of structure; will consist of 1733 ft. protected hydraulic fill and 13,900 ft. concrete beam and girder bridge, with large draw span in midstream; length of reinforced concrete structure 3633 ft.; Percival & Son, resident engineers, Rockport. (Aransas county lately noted to have voted \$300,000 bonds, etc.)

W. Va., McCorkle.—Lincoln County Commrs., A. C. Parsons, Prest., will erect 3 bridges; 1 each across Cobbs Creek at McCorkle, across Mud River at Fez, and over Trace Fork at Bowes Mill; bids until Oct. 6; Oliver & Maupin, Engrs., Huntington, W. Va. (See Machinery Wanted—Bridge Construction.)

CANNING AND PACKING PLANTS

N. C., Warrensville.—Buffalo Packing Co., capital \$50,000, inceptd. by W. H. Jones and A. F. Robinson of Warrensville and R. L. Ballou of Jefferson, N. C.

Tex., Ballinger.—E. A. Jeanes & Co. will install packing-room and cold-storage plant. (See Ice and Cold-Storage Plants.)

W. Va., Huntington.—West Virginia Brewing Co. (J. J. Fesenmeier and F. N. Honey, local representatives) is reported to remodel brewery into packing plant.

CLAYWORKING PLANTS

Ga., Macon.—Bricks.—Standard Brick Co., W. E. Dunwoody, Prest., will improve and enlarge plant.

Okla., Cleveland.—Bricks.—Cleveland Brick Co., capital \$75,000, inceptd. by G. W. Sutton, J. B. Myres, I. D. Gould and others.

Tex., Mexia.—Pottery.—H. P. Turner & Co., Athens, Tex., will establish pottery; monthly capacity about 15 cars of jars, jugs, etc.

COAL MINES AND COKE OVENS

Ala., Tuscaloosa County.—Central Iron & Coal Co., Holt, Ala., purchased 960 acres coal land in Tuscaloosa county from The Alabama Co.

Ark., Little Rock.—Thomas-Adams Fuel Co., capital \$10,000, inceptd. by T. W., T. O., V. C. and F. E. Adams.

Ky., Harlan.—Wilson-Berger Coal Co., capital \$250,000, inceptd. to develop 3000 acres coal land in Harlan county; principal office, Crewe, Va.; now constructing plants; contemplates shipping by Jan. 1; C. E. Wilson, Prest., Crewe; S. V. Preston, Mgr., Harlan; T. C. Berger, Secy.-Treas., Chattahoochee, W. Va. (These officers are owners and managers of Buffalo Collieries Co., Chattahoochee, and Mary Helen Coal Co., Hatfield, W. Va.)

Ky., Laurel County.—Dixie Land Co., John Howard, Prest., Middlesboro, Ky., purchased 2000 acres coal, timber and farming lands in Laurel county; will develop portion of tract and divide section into subdivisions for farming and truck gardening.

Okla., Oklahoma City.—Sans Bois Coal Co., capital \$10,000, inceptd. by D. J. Jordan, Mary A. Jordan and O. E. Jones.

Va., Crewe.—Wilson-Berger Coal Co., C. E. Wilson, Prest., will develop 3000 acres coal lands in Harlan county, Ky.; capital \$250,000; lately noted inceptd. (See Ky., Harlan.)

W. Va., Lex.—Rocky Branch Pocahontas Coal Co., capital \$5000, inceptd. by G. B. Hopkins of Lex, H. J. Brooke and J. A. Thorn of Welch, W. Va., and others.

W. Va., Mistletoe.—W. M. Septon, Chaska, Tenn., leased 756 acres coal lands from Silush Coal Co.; will develop. (See W. Va., Mistletoe, Silush Coal Co.)

W. Va., Mistletoe.—Royal Block Coal Co. (lately noted inceptd.) organized; main office, Madison, W. Va.; S. E. Bradley, Prest.-Treas.; H. G. Shaffer, Secy.; both of Madison; J. F. Thompson, V.-P., Mistletoe; J. B. Ramage, Mgr., Ramage, W. Va.; develop 1110 acres coal land; expects daily output 1000 tons; install electrical cutting and hauling machinery, gravity screen, etc.; constructing ½ mi. railway and ½ mi. sidings; opening 4 drifts; operate No. 5 block coal seam on Horse Creek of Little Coal River on property of Horse Creek Coal Land Co., Charleston, W. Va. (See Machinery Wanted—Mining Machinery.)

W. Va., Mistletoe (address is to be Silush, W. Va.)—Silush Coal Co., Charleston, W. Va. (lately noted organized, capital \$50,000, E. B. Siler, Prest., and C. C. Lovett, Gen. Mgr.), develops 3000 acres; daily capacity 1500 tons; machinery purchased; will release 756 of the 3000 acres to W. M. Septon, Chaska, Tenn., for development.

W. Va., Stone Coal Creek.—Pickshin Coal Co., capital \$50,000, inceptd. by D. Forest Early, J. E. Tolliver and C. H. Mead, all of Otsego, W. Va., and others.

W. Va., Wheeling Junction.—La Belle Iron Works (Steubenville, O.) contract to H. Koppers Co., First National Bank Bldg., Pittsburgh, Pa., for by-product coke ovens includes complete plant; will consist of 94 Koppers cross-regenerative by-product coke ovens with daily capacity 1000 tons coke; by-product plant will recover ammonia in form of ammonia sulphate, tar and benzol, and

will save (for use in steel mills) about one-half of gas produced by coal; contract includes foundations, coke ovens, by-product plant, benzol recovery apparatus, storage tanks, boiler plant, office laboratory building, machine shop, men's service building, stateroom, water tower, fire protection and coal and coke-handling equipment; Wm. Forsstrom, Ch. Engr. La Belle Iron Works, engineer in charge; plant location is directly across Ohio River from La Belle Iron Works at Steubenville. (Lately noted as having awarded contract, etc.; unconfirmed reports estimate plant cost at \$2,000,000.)

CONCRETE AND CEMENT PLANTS

Okla., Tecumseh.—Concrete Railway Ties.—Plastic Railroad Tie Co., J. W. Saxon, Prest., plans organization local companies and establishment plants in each State; also in foreign counties. (Previously mentioned under Tulsa.)

W. Va., Huntington.—Concrete.—Huntington Concrete Co., capital \$30,000, inceptd. by C. N. Davis, D. W. Brown, J. L. Caldwell, Jr., and others.

COTTON COMPRESSES AND GINS

Ark., Tupelo.—Crittenden Gin Co., capital \$3000, inceptd. by J. N. Snapp, A. L. Crittenden, W. N. Jones and others.

Fla., Jacksonville.—Port Commrs., F. W. Bruce, Ch. Engr., arranged cotton compress and warehouse contracts as follows: To Hillier & Sperring Co., Jacksonville, for 420x97-ft. building of concrete construction, costing \$31,000; will install standard high density compress and Morse press with daily capacity 1500 bales cotton; compressing equipment to cost \$50,000. (Lately mentioned.)

S. C., Pacolet.—Pacolet Oil Mill, W. S. McLure, Prest., will install ginning equipment. (See Cottonseed Oil Mills.)

Tex., Fort Worth.—Western Cotton Co., Continental Bank Bldg., organized by E. H. Whitaker (Gen. Mgr.), R. E. Orr and E. L. Carter; will build plant to reclaim damaged cotton; erecting 2 concrete buildings 24x100 ft. and 24x70 ft., respectively.

COTTONSEED-OIL MILLS

S. C., Pacolet.—Pacolet Oil Mill, W. S. McLure, Prest., Union, S. C., will build and operate lately-noted mill; metal construction; will install cottonseed-oil, fertilizer and ginning machinery; R. A. Easterling, Constr. Engr., Union.

Tex., Brenham.—Brenham Oil Co. increased capital stock from \$15,000 to \$30,000.

Tex., Houston.—Fidelity Cotton Oil Co. will expend \$10,000 to repair and rebuild plant on Washington Ave. damaged by August storm; Central Construction Co., contractor.

DRAINAGE SYSTEMS

Ark., Holmes.—Big Running Water Drainage Dist., lately noted (under Ark., Pocahontas) to let contract Nov. 1, will drain 640 acres in Randolph county, near Holmes, for farming; estimated cost, \$11,000; 2 canals; one 6 to 7-ft. bottom, other 5 to 12-ft. bottom; scraper or mule-team, and dredgeboat work; T. Z. Johnson, R. 1, No. 67, Walnut Ridge, Ark., interested. (See Machinery Wanted—Drainage.)

Ark., Marion.—Commrs. of Drainage Dist. No. 6 of Crittenden County, W. T. Castles, Chmn., let contract Otto Kochtitzky of Cape Girardeau, Mo., to construct 53.3 mi. of open ditches, comprising 1,645,000 cu. yds. excavation; issued \$140,000 bonds; reclaim 28,000 acres for cultivation; Willis E. Ayres, Engr., Randolph Bldg., Memphis, Tenn. (Call for bids lately noted.)

Ky., Paducah.—Mayfield Creek Drainage Dist., W. Mike Oliver, attorney, Paducah, has hearing in court this week upon proceedings for drainage project heretofore mentioned; expects to arrange to sell bonds and award contracts; construction plans drainage canal to straighten, widen and deepen Mayfield Creek from Boaz Station in Graves county through Graves, McCracken, Ballard and Carlisle counties to east bank of Mississippi River near Fort Jefferson, Ballard county; Fred F. Shafer, Drainage Engr.; W. C. Kelly, Dist. Engr.

La., Lafayette.—Lafayette Parish Indian Bayou Subdrainage Dist. of Orange Dist. No. 1 (lately noted to vote Oct. 2 on tax) will improve natural gravity drainage by construction of 30 mi. canal; 4 canals, average 204; estimated cost \$30,000; drain 24,000 acres in western part of parish for agriculture; will let contracts for the work or for machinery.

La., Vinton.—Commrs. Vinton Drainage Dist. will issue \$9000 bonds to complete drainage system; main canal and principal laterals are completed; additional levy is to construct laterals in more remote sections of district; S. J. Welsh, S. A. Fairchild and others compose Drainage Board.

Tex., Victoria.—Victoria county, Drainage Dist. No. 2, authorized \$14,000 bond issue to construct drainage system. Address County Commrs.

Tex., Waxahachie.—Ellis County Drainage and Levee Dist. voted \$125,000 bonds to construct drainage system; reclaim 12,000 acres. Address County Commrs. (Lately noted.)

ELECTRIC PLANTS

Ala., Birmingham.—City will expend \$11,000 for improvements at electric-light plant at North Birmingham, to include installation of additional generator and extension of wires to furnish light for city hall and Central High School; Julian Kendrick, City Engr., will invite bids.

Ala., Decatur.—Alabama Power Co., F. H. Chamberlain, Gen. Mgr., Birmingham, Ala., has no intention of building Decatur steam station at present; now making minor improvements to existing station, including installation of 150 K. W. unit. (Previously mentioned.)

Ark., Corning.—North Arkansas Utilities Corp., capital \$75,000, incptd. by Geo. A. Booser, C. L. Daniel, H. B. Hays and others; has practically completed boiler and generator houses of reinforced concrete and hollow tile construction; cost \$20,000; previously noted. (See Machinery Wanted—Electrical Machinery.)

Ark., Morrilton.—Arkansas Light & Power Co., Arkadelphia, Ark., purchased systems of electric and water companies of Morrilton; will improve and operate.

Ark., Stuttgart.—City organized improvement district to acquire electric-light and water plants. Address The Mayor.

D. C., Washington.—Supervising Archt. Treasury Dept. invites bids until Nov. 17 to construct central heating, light and power plant.

Ga., Graymont.—Cities of Graymont and Summit will erect lately-noted joint electric plant midway between the two cities; voted \$600 bonds. (See Ga., Summit.)

Ga., Summit.—Cities of Graymont and Summit will erect lately-noted joint plant midway between the two cities; cost \$10,000; about 2 mi. transmission; power-house about 25x33 ft.; use crude-oil engine and storage batteries; engineer not named; B. L. Rountree, Mayor of Summit.

Ga., Waco.—City, F. A. Little, Mayor, will construct electric-lighting distribution system; cost \$2000; electricity to be supplied from Bremer, 2 mi. distant; Boyd W. Little, Bowdon, Ga., has completed plans and estimates.

Md., Salisbury.—Eastern Shore Gas & Electric Co. of Delaware (change of name from Sussex Light & Power Co. of Laurel, Del.), Day & Zimmerman, Gen. Mgrs., 611 Chestnut St., Philadelphia, Pa., acquires control of Salisbury Light, Heat & Power Co. and Cambridge Gas, Electric Light & Power Co.; main local office, Salisbury; will make improvements and extensions to present power plants and transmission lines. (Lately noted.)

Miss., McComb.—Guy M. Walker of New York (S. M. Jones of Laurel, Miss., representative) purchased McComb Electric Light & Power Co.; reported to improve plant.

Mo., Campbell.—Campbell Electric Light & Power Plant (lately noted incptd. by Ben F. Elcholtz and others) will operate plant costing \$17,500; develop 200 H. P.; 15 mi. transmission; connect Gilson, Holcomb, Clarkton and Gideon; has purchased all material.

Mo., Columbia.—City is considering plans to extend transmission line to County Infirmary; cost about \$1200. Address The Mayor.

N. C., Ayden.—City let contract J. B. McCrary Co., Atlanta, Ga., to construct electric light plant; voted \$15,000 bonds. (Lately noted.)

N. C., Granite Falls.—Town Commrs. will construct electric-light system; Granite Falls

Mfg. Co. to furnish electricity; system to cost \$1500 to \$2000; D. M. Cline, Mayor. (See Machinery Wanted—Electric-plant Supplies.)

Okla., Soper.—City voted \$6000 bonds to purchase local electric-light and power plant. Address The Mayor. (Lately noted.)

S. C., Orangeburg.—City Council authorized Jas. E. Salley, City Electrician, to prepare plans and specifications for enlarging and extending electric-light plant and water-works; Edward Hawes, Jr., City Engr., to supervise engineering work; has machinery to be removed to new plant; also purchase additional equipment; estimated cost \$50,000. (Reported in July to have voted \$15,000 bonds for electric-light plant and \$15,000 for water-works.)

Tenn., Bolivar.—Western Hospital for Insane will rebuild burned electric-light plant and engine-house. (See Buildings Proposed, Hospitals.)

Tex., Kyle.—Excelsior Storage Battery Co. of San Marcos, Tex., will install electric-light plant; organized Kyle Light & Power Co. with \$5000 capital; secured franchise; reported to have ordered equipment.

Tex., San Angelo.—City contemplates installing electric lights on new concrete viaduct and on Chadbourne St. Address The Mayor.

Tex., Seguin.—City let contract Walter Tips Co. of Austin, Tex., at \$797 to furnish machinery to be installed at electric-light plant; equipment includes trump wheels, head harness, transmission gears, generator and switchboard; voted bonds. (Noted in November, 1914.)

Tex., Wharton.—Texas Southern Electric Co. purchased Wharton Ice & Light plant; will improve.

Va., Mineral.—City contemplates constructing electric-light plant and water-works. Address The Mayor.

PROPOSAL ADVERTISEMENTS IN THIS ISSUE

PUBLISHED ON PAGES 72 and 73.

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FERTILIZER FACTORIES

Md., Baltimore.—Baugh & Sons Co., 25 S. Calvert St., let contract to Chas. L. Stockhausen Co., 1 National Marine Bank Bldg., Baltimore, at about \$40,000 to erect sulphuric acid plant at fertilizer factory at Clinton and 11th Sts., Canton; capacity, 90 tons daily; 75x27x70 ft. high; construction of steel, brick and corrugated iron; Carey roofing; contract for steel to Chesapeake Iron Works, Severn and Bay Sts., Baltimore, at about \$20,000; for lead work installation let to Jas. Robertson Lead Co., 827 S. Howard St., Baltimore; Peter S. Gilchrist, Archt.-Engr., Charlotte, N. C. (Lately noted.)

N. C., Washington.—Famlico Chemical Co. let contract to D. J. Rose, Rocky Mount, N. C., to erect 135x225-ft. addition; ordinary mill construction; daily capacity of plant, 800 tons fertilizer.

Va., Lynchburg.—Pocahontas Guano Co., capital \$200,000, incptd.; Alex. B. Carrington, Pres.; A. Randolph Carrington, V.-P.; R. G. Evans, Secy.-Treas.

FLOUR, FEED AND MEAL MILLS

Ky., Louisville.—Flora Seed & Milling Co., lately noted incptd., capital \$25,000, by H. D. Hays (200 W. Main St., Louisville) and others, will operate in Flora, Ill.

Ky., Clearfield.—Clearfield Milling Co., capital \$1500, incptd. by W. B. Townsend, Jr., M. C. Crosley and John L. Crosley.

N. C., Clemmons.—J. F. Griffith is promoting erection of roller flour mill.

N. C., Lenoir.—Lenoir Mills, capital \$75,000, incptd. by J. H. Beall and others.

N. C., Rougemont.—W. A. Carver may install roller-process machinery for 24-hour capacity 25 to 35 bbls. flour; gas engine power. (See Machinery Wanted—Flour Mills.)

N. C., Wadesboro.—J. E. McLaughlin (care Mutual Life Insurance Co. office) is interested in proposed organization of company

to establish grist mill. (See Machinery Wanted—Grist Mill.)

S. C., Columbia.—B. B. Kirkland, Pres. Kirkland Distributing Co., will install machinery in self-rising flour mill to increase daily capacity from 50 to 150 bbls.; ordered machinery.

W. Va., Pemberton.—M. P. Snuffer may install wheat-flour equipment; is now installing buhr buckwheat flour mill. (See Machinery Wanted—Flour Mills.)

FOUNDRY AND MACHINE PLANTS

Ky., Louisville.—Structural Iron.—Grainger & Co. will purchase and install 3-phase alternating motor of 50 H. P. capacity.

Md., Texas.—War Munitions.—Poole Engineering & Machine Co., Woodberry, Baltimore, will erect plant in connection with large contracts for manufacturing war munitions; buildings of about 5 acres floor space; cost about \$200,000; employ about 300 hands; work begins about Oct. 7; tentative plans being prepared by company's engineers; architect not employed. (Lately noted under Miscellaneous Factories.)

Mo., St. Charles.—Oil Engines.—St. Marys Oil Engine Co., capital \$300,000, incptd. by J. D. Anderson, Louis F. Marten and John H. Steinbrinker.

Mo., St. Louis.—Car Wheels.—Green Car Wheel Co. is reported to build foundry costing \$6000.

Mo., St. Louis.—Laundry and Knitting Machinery.—Mercury Mfg. Co., capital \$50,000, incptd. by J. O. V. Stettin, H. L. Bonhoff, Arthur C. Eckert and others.

N. C., Raleigh.—Structural Steel, etc.—Raleigh Iron Works Co., Wm. T. Harding, Pres.-Gen. Mgr., proposes to issue \$250,000 preferred stock and enlarge plant; has not determined any details.

Okla., Nowata.—Hatch Oil & Gas Co., capital \$20,000, incptd. by Ed H. Arrasmith and N. W. Hancock of Nowata and Wm. Caspar of Kansas City, Mo.

Okla., Prague.—Central Oklahoma Gas Co., capital \$100,000, incptd. by Thos. E. Cullen and Carl L. Rogers of Oklahoma City and Chas. A. Wagner of Wichita, Kans.

Okla., Prague.—Prague Gas Co., capital \$10,000, incptd. by B. F. Whitmore, Wm. M. Jenkins and S. A. Thompson.

Okla., Paden.—Paden Gas Co., capital \$10,000, incptd. by E. L. Ford and B. F. Whitman of Prague and R. G. Casey of Paden, Okla.

Okla., Tulsa.—Ma-Lou Oil Co., capital \$32,000, incptd. by J. C. Neely of Tulsa, J. F. Hutson of Shannon, Tex., and P. O. Laughner of Pittsburgh, Pa.

Okla., Tulsa.—Tulsa Commercial Gas Co., capital \$100,000, incptd. by J. S. Cosden, E. R. Perry, M. D. Sanford and others.

Okla., Tulsa.—Lubricating Oils.—Cosden & Co. will build \$200,000 plant to manufacture automobile oils, cylinder oils, etc. (See Miscellaneous Factories.)

Tex., Aransas Pass.—Aransas Pass Oil & Gas Development Co., capital \$30,000, incptd. by J. J. Todd, Pres.; O. C. McLeod, V.-P.; Theo. G. Morris, Secy.-Treas.

Tex., Dallas.—Condor Oil Co., capital \$30,000, incptd. by Wm. Thompson, Wm. C. Thompson and John W. Kincaid.

Tex., Fort Worth.—Tarrant County Commrs. granted franchise to Fort Worth Gas Co. to extend mains to Riverside and Tostepco Heights, suburbs.

Tex., Henrietta.—Gas Plant.—Oklahoma Iron Works, Tulsa, Okla., has contract to install \$30,000 gas plant.

Tex., Houston.—Sour Lake Petroleum Co., capital \$15,000, incptd. by Geo. W. Strickler, E. R. Johnson and Andral Vann.

Tex., San Antonio.—Medina Oil & Gas Co., capital \$25,000, incptd. by C. H. Kellam, E. D. Neumann and P. D. Rosenbaum.

Tex., San Antonio.—National Oil Co., 235 E. Houston St., incptd. with \$75,000 capital; J. T. Marrs, Pres.; Leonard Isaacs, V.-P.; W. E. Gaither, Secy.-Treas.; I. P. Sissions, Gen. Mgr.

W. Va., Clarksburg.—J. E. Doman Oil Co., capital \$50,000, incptd. by M. E. Doman and J. E. Doman of Clarksburg, B. H. Hiner and C. D. Bowman of Franklin, W. Va., and others.

W. Va., Parkersburg.—Laro Oil Co., capital \$10,000, incptd. by Geo. W. Johnson, W. A. Cole, Harry O. Steiner and others.

W. Va., Pennsboro.—Conservative Oil & Gas Co., capital \$10,000, incptd. by Thos. Lamberg, Michael Naughton, E. J. McKinley and others.

ICE AND COLD-STORAGE PLANTS

Md., Baltimore.—American Ice Co., New York, will insulate building on Montford Ave. near Chase St. and install ice machinery; building 156x48 ft. and 70x68 ft.; plant to have capacity 100 tons daily; plans by Robt. B. Morrison, 135 Front St., New York; Baltimore office in Calvert Bldg. (Noted in August.)

Miss., Centerville.—Henry Dyer is reported to install ice plant. (See Miscellaneous Factories.)

N. C., Cary.—Cary Ice Co., W. W. Parker, Pres., is considering installation ice plant of 1½-ton capacity. (See Machinery Wanted—Ice Machinery.)

N. C., Marion.—Board of Trade is promoting organization of company to build ice plant.

Tenn., Bolivar.—Western Hospital for Insane will rebuild burned ice plant. (See Buildings Proposed, Hospitals.)

Tenn., Nashville.—Noel & Co. will build cold-storage plant; cost \$5000.

Tex., Ballinger.—E. A. Jeanes & Co. will enlarge produce-house; install cold-storage plant and packing-room for dressed turkeys and chickens; refrigeration to be by dry cold process, but will also manufacture ice to cool car-lot shipments.

Tex., San Benito.—Roy Campbell of San Benito and San Antonio will build pre-cooler; S. T. Fieshman has contract for foundation.

Va., Radford.—Radford Ice Corp., capital stock \$25,000, chartered; Anthony Gelson, Pres.; John J. Gelson, Secy.

IRON AND STEEL PLANTS

Ala., Thomas.—Iron Furnace.—Republic Iron & Steel Co., C. T. Fairbairn, Mgr. Southern Dist., Birmingham, Ala., completed

relining No. 3 blast furnace; cost about \$50,000; probably blow in before Jan. 1; general offices, Youngstown, O. (Heretofore mentioned.)

Ky., Ashland—Iron Furnace.—Ashland Iron & Mining Co. is reported as planning to blow in No. 2 furnace on Oct. 1; No. 1 furnace was blown in on Aug. 2.

Mo., Bismarck—Iron Furnace, etc.—W. H. Smollinger is reported to have sold Iron Mountain ore properties to capitalists whose development plans include construction of iron furnace.

Va., Max Meadows—Iron Furnace.—Virginia Iron, Coal & Coke Co. (main office, Roanoke, Va.) is reported as repairing iron furnace and to arrange for blowing in.

Va., Radford—Iron Furnace.—Virginia Iron, Coal & Coke Co. (main office, Roanoke, Va.) is reported as repairing iron furnace and to arrange for blowing in.

IRRIGATION SYSTEMS

Tex., Donna—Donna Irrigation Dist. No. 1, Hidalgo county, G. B. Meriwether, Pres., and D. H. Barr, Secy., voted lately noted \$750,000 bonds to enlarge and complete present canal system, pumping plant, etc.

Tex., Harlingen—Cameron County Irrigation Dist. No. 1 will extend canals; total of 510,200 cu. yds. excavation, for which directors of district will receive bids until Oct. 21. (See Machinery Wanted—Excavation.)

LAND DEVELOPMENTS

Ga., Douglas—Douglas Development Co., capital \$10,000, organized by J. N. McDonald, H. B. Curling, Oliver Peterson and others; develop lands for colonization; bought 500 acres; will clear and divide into 50-acre tracts; erect farmhouse and outbuildings on each tract.

Mo., Kansas City—Indian River Fruit & Vegetable Co., capital \$30,000, incptd. by Leonard C. Martin, Jess Feters and Edward Hanly.

N. C., Asheville—Asheville Development Co., capital \$25,000, incptd. by J. M. Giles, D. R. Hilliard and E. T. Belote.

S. C., Gaffney—Victoria Land & Improvement Co., capital \$20,000, incptd. by W. W. Gaffney, L. V. Gaffney and F. B. Gaffney.

S. C., Great Falls—Great Falls Farms Co., A. S. Goss, Ch. Engr., will develop 50,000 acres in Chester, Lancaster, Fairfield and Kershaw counties; improvements include roads, dwellings, farm buildings, soil improvement; work by the company at present. (Lately noted incptd., capital stock \$1,000,000, by H. A. Tibbs of Great Falls, N. A. Cooke and E. C. Marshall, Charlotte, N. C.)

Tex., Beaumont—St. Anthony Cemetery Co. incptd. by John F. Pipkin, E. J. Metzke, Jr., and A. E. Brullin.

Va., Norfolk—Rosemont Farming Corp., capital \$15,000, chartered; R. R. Upton, Pres.; M. R. Gregory, Jr., Secy.-Treas.

Va., Petersburg—Whitehead Development Co., capital \$60,000, incptd.; I. C. Shore, Pres.; Petersburg; J. W. Ferrell, Secy.-Treas., Greenville, N. C.

Va., Petersburg—East Petersburg Development Corp. organized with R. H. Mann, Pres.; Wm. H. Rahilly and J. L. Vaughan, V.-Ps.; T. McClanahan, Secy.; Horace L. Smith, Treas.; Ashton W. Gray, Gen. Mgr.; purchased 150 acres bordering on eastern corporate limits of Petersburg and will develop as residential section.

Va., Richmond—Richmond Land Corp., capital \$500,000, chartered; W. D. Duke, Pres.; Norman Call, Secy.

LUMBER MANUFACTURING

Ala., Attalla—T. B. Nobles is reported to build planing mill.

Ark., Arkadelphia—J. T. Knowles and others, representing Pioneer Pole & Shaft Co., will rebuild hardwood mill on Deceper Lake; also build another mill near river.

Fla., Viking—Ford Lumber & Supply Co., capital \$25,000, incptd.; Axel Ford, Pres.; W. E. Gibson, Secy.-Treas.; operating sawmill.

Ga., Macon—Macon Hardwood Lumber Co., capital \$25,000, incptd. by X. Y. McCann, B. T. Adams and F. W. Williams.

Ky., Laurel County—Dixie Land Co., John Howard, Pres., Middlesboro, Ky., purchased

2000 acres timber, coal and farming lands in Laurel county; will develop portion of tract and divide section for small farming and truck gardening.

Ky., Somerset—Humble Bros. Lumber Co., capital \$5000, incptd. by E. Humble, Sam M. Humble and L. Hershel Humble.

Ky., Winchester—Ties—Cumberland Valley Tie Co., Box 95 (lately noted incptd., capital \$2000), operates plant in Bell county with capacity of 10,000 to 20,000 ties per month; plant equipped; H. C. Woolf, Pres.; L. H. Shipp, V.-P. and Mgr.; K. C. Woolf, Secy.-Treas.

Mo., Elkton—National Wood Preserving & Lumber Co., capital stock \$150,000, incptd. by Clement M. Egner and others.

Miss., Braxton—Pine Belt Lumber Co. increased capital stock from \$50,000 to \$100,000.

Miss., Braxton—Pine Belt Lumber Co. increased capital stock from \$50,000 to \$100,000.

Miss., Issaquena—Issaquena Lumber Co. increased capital from \$100,000 to \$275,000.

Miss., Leakeville—Green County Land & Timber Co., capital \$100,000, incptd. by W. B. Lundy and J. L. Taylor.

Miss., McComb—Amite Lumber Co., capital \$80,000, incptd. by L. Z. Dickey, Geo. Brown, V. C. Dickey and others.

N. C., Bryson City—Robert Wittmer, Philadelphia, Pa., is reported as to build 3-band sawmill; now surveying for lumber railway from Lofty River boundary to mill site.

Tex., El Paso—American Lumber & Investment Co. increased capital stock from \$50,000 to \$100,000.

Va., Norfolk—Fosburgh Lumber Co. will rebuild 13 drykilns and lumber reported burned at estimated loss of \$150,000.

W. Va., Charleston—Huntley Lumber Co., capital \$100,000, incptd. by V. L. Black, O. P. Fitzgerald, H. A. Lightner and others.

METAL-WORKING PLANTS

Mo., St. Louis—Sheet Metals—Hyke Bros. Mfg. Co., capital \$20,000, incptd. by Francis G. Hyke, Fred Hyke and Albert L. Hyke.

W. Va., Wheeling—Tin—Wheeling Tin Works, capital \$5000, incptd. by H. S. Sands, C. H. Geiger, E. O. Kizer and others.

MINING

Ark., Cotter—Moark Mining Co., capital \$8000, incptd. by S. T. Davis, Geo. F. Coleman and B. S. Adams.

Ga., Atlanta—Gold—Atlanta Home Gold Mining Co. incptd. by Thos. J. Purcell, R. W. H. Smith and L. M. Hart, all of New York.

Ga., Gordon—Kaolin—F. H. Oppen, F. P. McIntire, A. B. Moore, E. G. McDonald and T. P. Maynard, all of Atlanta, Ga., will organize company to develop 316 acres kaolin land in Wilkinson county near Gordon; propose to construct washing plant with initial daily output 50 tons and ultimate output 100 tons.

Miss., Brookhaven—Fluorspar, etc.—North American Fluorspar & Lead Corp., capital stock \$50,000, incptd. by F. B. Moodie of Brookhaven, E. L. Moodie and E. G. Rogers of Jacksonville, Fla.

Mo., Duenweg—Lead and Zinc—L. H. & B. Mining Co., capital \$32,000, incptd. by M. Lown, J. R. Hastings and A. T. Blackwell.

Mo., Duenweg—Lead and Zinc—Yellow Hawk Mining Co., capital \$50,000, incptd. by Harrison Keller, Eli Keller and Frank Walker, all of Duenweg, and Geo. W. Short of Joplin, Mo.

Mo., Joplin—Lead and Zinc—Oklahoma Consolidated Lead & Zinc Corp. organized; L. L. Hutchison, Pres.-Mgr.; J. P. Hutchison, V. P. and Treas.; L. W. Gray, Secy.; offices at 312 Central National Bank Bldg., Tulsa, Okla.; will develop 26 acres lead and zinc land; 500-ton milling capacity per ship; will build mill. (Lately noted incptd., etc.)

Mo., Milan—Lead and Zinc—Milan Mining Co., capital \$8000, incptd. by W. L. M. Witter, P. G. Brumbaugh and B. W. Lightburn.

Okla., Davis—Lead and Zinc—Washita Lead & Zinc Mining Co., Washita, Okla., is reported to install machinery in zinc reducing mills near Davis; ordered equipment.

Okla., Miami—Rose Mining Co., capital \$100,000, incptd. by Eugene McQuillin and J. C. Brymer of Miami, W. C. Collins and J. W. Nichols of Chicago, Ill.

Okla., Shawnee—St. Joe Mining Co., capital \$25,000, incptd. by M. Evans of Shawnee, B. A. Lewis and E. G. Hathaway of Dewey, Okla.

Tenn., Centerville—Phosphate.—S. M. Ward of Nashville, Tenn., is interested in plans to develop phosphate mines.

Tex., O'Quinn, P. O. at La Grange—Magnesia and Meerschbaum.—J. C. Meicher is reported interested in plan to develop magnesia and meerschbaum deposits.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile—Docks, Warehouses, etc.—Terminal Transfer & Storage Co., J. H. Quill, Secy.-Treas., let contract Stone & Webster Engineering Corp., 107 Milk St., Boston, Mass., for constructing buildings, wharves, trackage, necessary equipment, etc., for river terminals; plans and specifications as prepared represent \$1,000,000 plant; begin construction within 30 days; detailed plans, etc., will soon be announced. (Lately reported to provide for terminal improvements on 33 acres, etc.)

D. C., Washington—Heating Plant, etc.—Supervising Archt., Treasury Dept., invites bids until Nov. 17 to construct central heating, light and power plant.

Fla., Miami—Channel, etc.—City voted \$645,000 bonds, of which \$360,000 will be expended to construct ship channel in Biscayne Bay; \$40,000 to construct local railway; \$50,000 to pay city's share of cost of constructing sanitary sewers; \$75,000 to build bridge over Miami River at 12th St.; \$75,000 to construct bridge over Miami River at Ave. D; \$25,000 to construct bridge over Miami River at Ave. G; \$20,000 to erect hospital; B. H. Klyce, City Engr. (Lately noted.)

Fla., St. Augustine—Power-boat Dock.—Power Boat Club arranged with F. O. Iwanowski to rebuild power-boat dock.

La., Alexandria—Levee.—Board of State Engrs., New Orleans, let contract for Red River Atchafalaya and Bayou Boeuf Levee Board to Dameron-White Co., of New Orleans to construct levee from White Place to Wilson Point, Red River, right bank, 12 mi. below Alexandria; 175,000 cu. yds. earthwork.

La., New Orleans—Levee.—Dameron-White Co., of New Orleans is lowest bidder to construct Kennerville levee, Jefferson parish, Mississippi River, left bank; new levee and riverside embankment; contents, 125,000 cu. yds.

La., New Orleans—Levees.—State Board of Engrs. invite bids until Oct. 5 to construct following: Willow Chute Levee, contents, 55,000 cu. yds.; Gold Point Spur Levee, contents, 15,000 cu. yds.; Riverside Levee, contents, 125,000 cu. yds.; Colquitt Point Levee, contents, 36,000 cu. yds.; Pat Cash Levee, contents, 60,000 cu. yds.; Rocky Bayou Levee, contents, 44,000 cu. yds. (See Machinery Wanted—Levee Construction.)

Md., Baltimore—Dredging.—War Dept., through Maj. Stickle, U. S. Engr. in charge of Baltimore Dist., let contract Maryland Dredging Co., 1515 Fidelity Bldg., Baltimore, to deepen 11 rivers and harbors on Eastern Shore of Chesapeake Bay. (Call for bids lately noted.)

Miss., Meridian—Subway.—Alabama & Vicksburg Ry. (W. V. Harvey, Supt., Vicksburg, Miss.), New Orleans & Northeastern R. R. (S. E. Flanigan, Supt., New Orleans, La.) and Mobile & Ohio R. R. (B. A. Wood, Chief Engr., Mobile, Ala.) are considering construction of subway on 26th St. from Front to A St.; estimated cost \$75,000 to \$100,000. (Noted in May.)

Miss., Senatobia—Levee.—Tate county will construct levee across Hickahala Bottom on Memphis and Oxford Rd.; County Supvs. receive bids until Oct. 4; J. A. Wooten, Clerk. (See Machinery Wanted—Road Construction.)

Mo., Kansas City—Heating Plant.—Curtis Hill, City Engr., will prepare plans for heating plant to be installed in city market; hot-blast system; heat to be piped across street from city hall in coils through underground tunnel; Board of Public Works will let contract Oct. 5; estimated cost \$4000.

N. C., Barium Springs—Central Heating Plant.—Board of Regents Presbyterian Orphanage let contract B. MacKenzie, Greensboro, N. C., to construct central heating plant (Webster system); cost \$12,000.

S. C., Charleston—Marine Railway.—Navy Dept., Washington, D. C., approved plans for marine railway at Navy-yard, probably on Cooper River front between buildings 2 and 3; Congress appropriated \$50,000.

Tex., Beaumont—Wharf, etc.—Wharf and Dock Com. authorized Oscar Seward, Resident Engr. to approve plans prepared by Hugh McL. Harding, Harbor Engr., and to invite bids on construction of second unit of municipal wharves; wharves to extend

from present city wharves along river front 5000 ft. and be built of concrete 16 ft. above low tide; bids to include fireproof sheds 6x400 ft. and 30 ft. high, necessary loading and unloading devices and terminal tracks; \$100,000 bonds voted for initial construction. (Lately noted.)

Tex., Port Arthur—Levees.—City retained J. F. Coleman, Cons. Engr., 929 Hibernia Bldg., New Orleans, La., to make surveys and submit plans and estimates relative to improved drainage which may include enlargement of levees; surveys are not yet complete. (Lately noted as "seawall.")

Va., Newport News—Bulkhead.—War Department, Washington, D. C., authorized city to extend bulkhead line along Hampton Roads 2000 ft. east of municipal pier to Ivy Ave. pier; will reclaim about 43 acres land. Address The Mayor.

Va., Norfolk—Dredging.—Government will dredge at Norfolk Navy-Yard; bids until Oct. 9; H. R. Stanford, Ch. of Bureau of Yards and Docks, Washington, D. C. (See Machinery Wanted—Dredging.)

Va., Norfolk—Dam, etc.—W. W. Gwathney and Wm. H. Taylor, Engrs., submitted report to City Council recommending that dams and spillways at Little Creek be repaired at cost of \$36,102, new dam to be built at Lake Taylor and spillway repaired at cost of \$23,682, making total of \$59,784.

Va., Norfolk—Railway Freight Piers.—Norfolk & Western Ry., L. E. Johnson, Pres., Roanoke, Va., will expend \$1,700,000 to erect freight piers and sheds near Lambert's Point; southbound pier 1200x220 ft.; northbound pier 800x220 ft.; creosoted pile and timber; steel sheds; flat built-up roofs; slips between 2 structures; 4 tracks on each pier; construction will require dredging about 1,000,000 cu. yds. earth; plans and specifications by engineering department of railway; bids have not yet been asked; E. M. Graham, Terminal Supt., Norfolk.

Va., Richmond—Dredging.—Maryland Dredging & Contracting Co., 1515 Fidelity Bldg., Baltimore, Md., is lowest bidder to excavate James River Channel; bid is \$36,000 for rock work and \$8550 for earth excavation; work will consist of removal of 200 cu. yds. hard rock and 15,000 cu. yds. earth.

W. Va., Huntington—Subway.—City accepted offer by Chesapeake & Ohio Ry. (F. I. Cabell, Ch. Engr., Richmond, Va.) to begin construction of proposed 10th St. subway not later than May 1, 1917.

MISCELLANEOUS ENTERPRISES

Ark., Pine Bluff—Incinerator.—City contemplates building incinerator. Address The Mayor.

Ga., Atlanta—Amusement Park.—South-eastern Fair Assn. will improve Lakewood as amusement park; construct 1-mi. speedway around lake, build bathhouses, probably of concrete, install amusement devices, etc.

Ga., Atlanta—Storage Batteries.—Willard Storage Battery Co. of Cleveland, Ohio, leased building used at 8-10 E. Cain St. and will install electrical plant to charge auto storage batteries for Southern territory.

Ga., Atlanta—Publishing.—Atlanta Post Co. incptd. by W. H. Chivers, E. L. Colliers and others.

Ga., Macon—Delivery.—Macon Delivery Co., capital \$1000, incptd. by C. B. James and L. W. Mimms.

Ga., Savannah—Lighterage.—South Coast Barge Co., capital \$10,000, incptd. by Carl J. Herman, L. G. Armstrong, W. W. Butler and Edmund H. Abrahams.

Miss., Natchez—Bottling.—Walter Springs Water Co., capital \$10,000, incptd. by D. H. Britton, C. F. Engle and others.

Mo., Kansas City—Cleaning and Dyeing.—Dorn Cleaning & Dyeing Co., capital \$10,000, incptd. by Emil Dorn, W. H. Cloney and H. P. Green.

N. C., Greensboro—Publishing.—J. M. Reece Publishing Co., capital \$25,000, incptd. by J. A. Williams, Alice M. Reece and Sue R. Williams; will continue publication of Greensboro Record.

Okla., Wagoner—Printing.—Democrat Printing Co., capital \$2000, incptd. by H. S. Foster of Wagoner, B. C. Hodges and Eugene M. Kerr of Muskogee.

S. C., Beaufort—Printing.—Beaufort Gazette Printing Co., capital \$4000, incptd. by Nells Christensen, S. H. Rodgers, H. D. Oswald and Inez H. Lomborg.

S. C., Port Royal—Incinerator.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract Newport Engineering & Contracting Co., Newport News, Va., at \$4676 to construct buildings and incinerator at naval disciplinary barracks, Port Royal.

Tenn., Bolivar—Laundry.—Western Hospital for Insane will rebuild burned laundry. (See Buildings Proposed, Hospitals.)

Tenn., Nashville—Contracting and Building Supplies.—M. A. Lightman Co., capital \$15,000, incptd. by M. A. Lightman, C. S. Lightman, L. Jones and others.

Tex., El Paso—Laundry.—El Paso Ice & Refrigerating Co. will erect 2-story pressed-brick building; portion of lower floor and entire upper floor leased to Sanitary Steam Laundry; balance of first floor for creamery.

Tex., Hamilton—Grain Elevator.—Hamilton Mill & Elevator Co. will rebuild collapsed grain elevator.

Tex., Marble Falls—Incinerator.—City will vote on \$2000 bonds to install crematory; about 2 tons capacity; R. E. Johnson, Mayor. (Lately noted.)

Va., Emporia—Transfer.—Emporia Transfer Co., capital \$10,000, incptd.; W. W. Green, Pres.; R. W. Little, Secy.-Treas.

Va., Richmond—Hardware.—Bell-Brown Hardware Co., capital \$15,000, incptd.; R. L. Newton, Pres.; J. W. Newton, Secy.-Treas.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Roofing Products.—Roofing Products Co., capital \$10,000, incptd.; F. Larkin, Pres.; H. W. Stansbury, V.-P. and Gen. Mgr.; H. M. Thweatt, Secy.-Treas.

Ala., Mobile—Turpentine Cups, etc.—Lerio Patent Cup Co., capital \$5000, incptd. to manufacture turpentine cups, etc.; Louis Lerio, Pres. and Gen. Mgr.; R. E. Williams, Secy.-Treas.

Fla., Greensboro—Beds.—Dezell Enterprise Co., James A. Dezell, Pres., proposes to arrange for manufacture and introduction of patented bed. (See Machinery Wanted—Bed Manufacturers.)

Fla., Jacksonville—Bakery.—Purity Baking Co., capital \$40,000, incptd.; Geo. E. Brown, Pres.; W. H. LeFever, V.-P. and Treas.; B. K. Hall, Secy.

Fla., Jacksonville—Rugs and Matting.—Palmetto Products Co., 17 Madison Ave., New York, is reported to establish rug and matting factory.

Fla., Miami—Moving-picture Studio.—Thanhouse Film Corp., Edwin Thanhouse, Pres., main office, New Rochelle, N. Y., is reported as contemplating erection of studio.

Ga., Augusta—Tires and Rubber.—Southern Tire & Rubber Co. will install additional machinery to increase daily capacity of plant from 70 to 150 automobile tires; equipment ordered.

Ga., Augusta—Mattresses and Springs.—Hutchison Bedding Co. (Earl H. Hutchison), 828 Fenwick St., purchased equipment for lately-noted leased factory building; manufacture mattresses and springs; daily capacity 100 mattresses and 50 metallic framed springs.

Ga., Savannah—Bakery.—Nugent's Bakery will construct building and equip for baking plant; building plans and specifications by John Ahlschlager & Son, Archts.-Engrs., Chicago, Ill.

Ky., Bowling Green—Ice Cream.—Mike P. Grady will erect 2-story brick factory building; Rogers & Bush rented structure and will install ice-cream plant.

Ky., Louisville—Tobacco.—G. O. Tuck & Co., capital \$80,000, incptd.; G. O. Tuck, Pres.; J. Wallace Vaughan, V.-P.; A. Braithling, Secy.-Treas.

Ky., Paducah—Tobacco.—Weyman-Bruton Co. (main office, 50 Union Sq., New York) Oscar Hank, Paducah, Mgr., is reported to have let contract Wm. Karnes of Paducah to build tobacco factory.

La., Lafayette—Brooms.—Merchants' Brooms Mfg. Co., capital \$50,000, organized by Chas. N. Thibodeaux, Alfred Hebert, Albert J. Allemen and others.

Miss., Centerville—Creamery, etc.—Henry Dyer is reported to install creamery, cheese factory, ice-cream factory and ice plant; purchased buildings.

Miss., Yazoo City—Bakery.—J. W. Campbell has contract to build bakery; front of white enamel; lower floor of white tile.

Mo., Kennett—Incubators.—Porter Electric Incubator Co., capital \$6000, incptd. by Lee Shelton, Dr. Theo. Robb and B. C. Porter; will secure building and equip to manufacture incubator designed to apply device patented by Mr. Porter for control of electrically-generated heat when applied to incubator, vulcanizers, etc.

Mo., St. Joseph—Park Mfg. Co., capital \$2000, incptd. by R. M. Heilman, O. W. Watkins and Forrest C. Campbell.

Mo., St. Louis—Buggies.—Self-Greasing Buggy Co., capital \$25,000, incptd. by Frank J. Brune, John T. Guls and Wm. F. Schmand.

Mo., St. Louis—Automobile Bodies.—Commercial Auto Body Co., Hugh F. Cartright, owner and manager, 3003 Locust St., purchased machinery for lately-noted leased building for manufacture of commercial bodies for automobiles; daily capacity 20 bodies.

Mo., St. Louis—Mercury Mfg. Co., capital \$50,000, incptd. by J. O. V. Stettin, H. L. Bonhoff and Arthur C. Eckert.

N. C., Hewitts—Marble Mill.—North Carolina Talc & Mining Co. contemplates erecting in the spring a marble mill on site of plant reported burned; officers include F. R. Hewitt, Pres. and Treas.; L. L. Jenkins, Asheville, V.-P.; F. E. Fry, Secy. and Mgr.

N. C., Raleigh—Bottling.—Raleigh Christ-Cola Bottling Works, capital \$10,000, incptd. by J. Winder Bryan and others.

Okla., Hobart—Buckles.—Blank Seven Buckle Co., capital \$10,000, incptd. by E. L. Barnes, F. M. Miller and A. E. Fritsche.

Okla., Tulsa—Wax, etc.—Cosden & Co., J. S. Cosden, Pres., will build plant costing \$200,000 for manufacturing wax, automobile oils and cylinder oils; has begun construction.

S. C., Columbia—Brooms.—P. F. Bouknight of Atlanta, Ga., will install broom factory at 1111 Gervais St.; daily capacity 10 doz. brooms; machinery purchased; operate as Columbia Broom Works.

S. C., Sumter—Magnets.—Spiltdorf Electrical Co., Newark, N. J., is reported to have purchased Sumter Electrical Co. for \$1,000,000; purchase enables Spiltdorf to produce magnetos for every type of gas engine; heretofore manufactured magnetos for automobiles and aeroplanes only.

Tenn., Chattanooga—Chemicals and Paints.—Harrison Bros. Co., Philadelphia, Pa., manufacturer of chemicals and paints, will build branch factory; has not formulated plans. (Lately reported to have purchased site for large plant.)

Tenn., Morristown—Gloves.—Southern Glove Mfg. Co. increased capital from \$5000 to \$10,000.

Tenn., Nashville—Beverage.—Matthews Syrup Co., Arcade Bldg., incptd. by J. G. Matthews, Harry Davis, Geo. Hight and others.

Tenn., Nashville—Puncture Pluggers.—Bales Puncture Plugger Co., capital \$1000, incptd. by R. J. Fulham, R. G. Denham, E. S. Morgan and others.

Tenn., Nashville—Motion Pictures.—Avoca Motion Picture Corp., capital \$100,000, incptd. by Harry F. Green, W. H. Hooser, John Trotwood Moore and others.

Tenn., Nashville—Heating and Lighting Systems.—Economy Heating & Lighting Co., L. R. Jarrett, Mgr., 807 Church St., will manufacture kerosene and gasoline heating and lighting systems.

Tex., Dallas—Water Heaters.—Ruud-Humphrey Water Heater Co. of Texas, 1501 Commerce St. (lately noted incptd., capital \$10,000) organized; F. A. Lemke, Kalamazoo, Mich., Pres.; D. A. Hardie, Pittsburgh, Pa., Secy.; C. H. Seiderglanz, Gen. Mgr.; selling organization, to represent in Texas and Mexico, the Ruud Mfg. Co. of Pittsburgh and Humphrey Co. (division of Ruud Mfg. Co.), Kalamazoo.

Tex., Houston—Overalls, etc.—Miller Bros. of Galveston will establish branch plant to manufacture overalls and jumpers; secured space in Scanlan factory building; install 50 machines.

Tex., Mission—Brooms.—E. C. Overmiller, C. C. Andrews, M. T. Wiley and others plan organization of company to establish drying, threshing and baling plant; cost about \$1500.

Tex., San Antonio—Sauce.—Mitrovich Mfg. Co., Adolph Mitrovich, Propr., is reported to increase daily capacity of plant; present daily capacity 100 gals.

Va., Hopewell—Powder.—E. I. du Pont de Nemours Powder Co., offices, Wilmington, Del., is reported as to double capacity of Hopewell plant; construct structural buildings, for which material has been received; also build homes for employees; employs 36,000 men when these plant additions are completed.

Va., Norfolk—Gloves and Dolls.—Virginia Glove Mfg. Co., 3908 38th St., W. V. Martin, Gen. Mgr. and Treas., will manufacture canvas gloves and rag dolls. (Lately noted incorporated, capital \$15,000, etc.)

Va., Portsmouth—Medicine.—Tidewater Medicine Co., capital \$100,000, incptd.; T. W. Parsons, Pres., West Norfolk; Jeter C. Kaufman, Secy., Portsmouth.

Va., Roanoke—Candy.—Baldwin Candy Corporation, capital \$10,000, chartered; E. C. Baldwin, Pres.; J. C. Cassell, Jr., Secy.

Va., Woodbridge—Road Maps.—Vladex Mfg. Co., capital stock \$200,000, incptd.; George A. Deardorff, Pres.; Jo Rice, Secy., both of Occoquan; will manufacture road maps for automobile users.

W. Va., Charleston—Powder.—E. I. du Pont de Nemours Powder Co., offices, Wilmington, Del., filed incorporation papers indicating intention to transact business in West Virginia; is reported as to invest \$500,000 to buy land and build powder factory at Nemours and to build magazines for explosives at Charleston, Martinsburg, Huntington, Piedmont, Bluefield, Scarbro, Kellogg, Blaine and Rock.

W. Va., Charleston—Dye Chemicals.—Warner-Klipstein Chemical Co., capital stock \$500,000, incptd. by Ernest C. Klipstein, Treas. of A. Klipstein & Co., 644 Greenwich St.; Lucien C. Warner, 52 Vanderbilt Ave.; Franklin H. Warner, 52 Vanderbilt Ave.; Ernest H. Klipstein, 644 Greenwich St., and Harry R. Nelson, 2 Vanderbilt Ave.; all of New York; will manufacture mainly carbon tetrachloride, with caustic soda and synthetic dyes as by-products; electric power; purchased 12-acre site for plant. (Lately reported to build \$200,000 plant.)

MOTORS AND GARAGES

Ala., Ashland—Garage.—P. O. Randall, Ashland, is preparing plans and specifications for garage and machine shop; brick and wood; plate-glass front for first floor; 16 offices on second floor, each equipped with ventilating casement sash; 5 skylights; construction under supervision of architect.

D. C., Washington—Automobiles and Tires.—Livingston Co., capital \$5000, incptd. by John Lewis Smith (Southern Bldg.), Le Roy Livingston and Wm. N. Wood.

Ga., Atlanta—Motor Trucks.—E. G. Willingham will build motor-truck factory; 3 stories; brick and hollow tile; 72x85 ft.; reinforced concrete frame; cost \$17,000; Griffin Construction Co., Contr.

Ga., Columbus—Garage.—Ben T. Brooks let contract Cooper Lumber Co. to remodel storerooms as garage and display-room; improve frontage of 65 ft.; plans by Chas. F. Hickman, Columbus.

Ky., Carlisle—Automobiles.—Bluegrass Motor Co., capital \$15,000, incptd. by M. T. Ruddell, Maude S. Kerr and W. McKewan Callair.

Ky., Mt. Sterling—Automobiles.—Strother Motors Co., capital \$5000, incptd. by G. H. Strother, Matilda Strother and Paul Strother.

Mo., Joplin—Automobiles.—Joplin Motor Co., capital \$10,000, incptd. by Ray Rinehardt, Ivan A. Lowe and M. I. Molley.

Mo., Kansas City—Automobiles.—Kansas City Motor Sales Co., capital \$3000, incptd. by A. F. Straus, Arthur Hertz and B. M. Solomon.

Mo., St. Louis—Garage.—Henry Walter will erect 1-story brick garage; cost \$3000; King Realty Co., Contr.

N. C., Ayden—Automobile.—Eastover Motor Co., capital \$30,000, incptd. by J. R. Turnage, N. S. Summerger and A. E. Garbis.

N. C., Lexington—Automobiles.—Lexington Auto Co., capital \$10,000, incptd. by W. E. Raper, Demot Shemwell and E. E. Raper.

Okla., Frederick—Automobiles, etc.—J. L. Lair let contract to A. H. Krause, Frederick, to erect \$6000 50x140-ft. 1-story building with cement walls and floors and girder roof; to be occupied by Walker & Phipps, dealers in Ford cars and automobile accessories and repairers of automobiles; plans by A. H. Krause.

Okla., Oklahoma City—Assembling Plant.—Ford Motor Co. (main office, Detroit, Mich.) let contract Hodgins Construction Co. of St. Paul, Minn., to build assembling and service plant; 275x135 ft.; reinforced concrete foundation; front of pressed brick; covered platform; steel window sashes and frames and steel doors; automatic steel doors for elevator shaft entrances; sprinkling system supplied by 2 tanks—1 on roof with capacity of 150,000 gals. and 1 in basement with capacity of 200,000 gals.; sprinkler equipment to be operated by electric motors; display and sales rooms on ground floor; repair shop, 200x135 ft.; garage, 200x135 ft., on first floor, etc.; plans by Albert Kahn of Detroit. (Lately noted.)

S. C., Greenville—Automobiles.—Carolina Motor Sales Co., capital \$5000, incptd. by Sam McGowan and Kate Kneble.

Tenn., Nashville—Assembling Plant.—Ford Motor Co. (main office, Detroit, Mich.) let

contract Foster & Creighton Co., Nashville, to erect service building; 3 stories; 75x170 ft.; fireproof; mushroom type of reinforced-concrete construction; reinforced concrete throughout, including roof; steel sash windows; electric elevator; steam heat; automatic sprinkler system; showrooms and offices finished in hardwood; install complete equipment for assembling and rebuilding cars; building plans by Marr & Holman of Nashville.

Tex., Cleburne—Garage.—S. S. Davis let contract R. L. Davenport to build garage for Carl Davis; brick; 52½x105 ft.

Va., Clifton Forge—Garage.—Virginia Garage Co., capital \$30,000, incptd.; B. H. Tatum, Pres.; E. A. Sneed, V.-P.; B. C. Goodman, Secy.

Va., Roanoke—Automobiles.—Meadows-Price Co., capital \$50,000, incptd.; D. S. Meadows, Pres., Roanoke; R. E. Price, Secy., Danville.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Okla., Ardmore—Oklahoma, New Mexico & Pacific Ry., W. J. Stoneburner, Gen. Supt., will build combination shop and roundhouse with compartments for 3 locomotives at present; building of steel with composition roofing; cost about \$6000.

Va., Roanoke—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, will build addition to engine-erecting shop; length 150 ft.; steel frame and trusses, slate roof, brick walls on one side and galvanized siding above level of machine-shop roof on opposite side, at which it will connect with machine shop; install crane runways for 100, 15 10 and 5-ton cranes which are now in use in completed portion of building; new structure to be used for building and repairing heavy locomotives and will replace present brick building used for same purpose; Virginia Bridge & Iron Co., Roanoke, has contract for furnishing and fabricating steel work; railway employees have constructed foundations and will erect building; estimated cost \$60,000; no new equipment required. (Lately noted.)

ROAD AND STREET WORK

Ark., Eureka Springs—Eureka Springs and Carroll county will expend \$75,000 on lately-noted gravel road construction; 20 mi.; date of opening bids not set; H. R. Carter, State Highway Engr.

Ark., Mount Ida.—Montgomery county contemplates organizing road district to construct pike road from Mt. Ida to Hot Springs, 40 mi. Address County Commrs.

D. C., Washington—Dist. Commrs., Room 305 District Bldg., will pave with sheet asphalt, asphalt blocks and bitulithic; receive bids until Oct. 19. (See Machinery Wanted—Paving.)

Fla., Clearwater.—City let contract at \$9087 to Pinellas Construction Co., Augusta, Ga., to construct concrete curb and gutter and sand-filler brick pavement; J. N. Drew, Engr.; bids lately mentioned. (Incorrectly noted as "Ga." in Bulletin Sept. 28.)

Fla., Clearwater.—Pinellas County Commrs. will order another election to vote on \$715,000 bonds to construct 73.34 mi. brick road, contract for which has been awarded to Edwards Construction Co. of Tampa; previous election declared illegal; J. B. McCrary Co. (main office Atlanta, Ga.) is engineer. (Lately noted.)

Fla., Green Cove Springs.—Clay County Commrs. will construct about 30 mi. road; bids until Oct. 6; M. W. Griffiths, Clerk Circuit Court. (See Machinery Wanted—Road Construction.)

Fla., Miami.—B. H. Klyce, City Engr., prepared plans and specifications to pave sections of Ave. C, Ave. D, Boulevard, etc.

Fla., Pensacola.—City, Thos. H. Johnson, Commr. of Streets and Public Works, will construct about 4000 sq. yds. pavement and 1500 lin. ft. concrete curb; bids until Oct. 17; L. E. Thornton, City Engr. (See Machinery Wanted—Paving.)

Fla., St. Andrews—City voted \$24,000 bonds for street improvements, etc. Address The Mayor.

Fla., Tallahassee.—Leon county voted \$200,000 bonds to construct roads. Address County Commrs. (Noted in August.)

Fla., Tarpon Springs.—City, J. H. Regester, City Clk., let contract to Southern Concrete & Construction Co., H. A. Dann, Mgr., St. Petersburg, Fla., to construct lately-noted 100,000-sq.-ft. concrete sidewalks; cost \$15,000; work includes sidewalks, grading and retaining walls.

Fla., West Palm Beach.—Palm Beach County Commrs. let contract Greynolds & Monroe of West Palm Beach to lay rock foundation for main line county road in Dist. No. 5 and Edwards Construction Co. of Tampa for surfacing.

Fla., Winter Park.—City, T. M. Henkel, Chrmn. Street Com., let contract Southern Clay Mfg. Co., Chattanooga, Tenn., to construct brick pavement; cost \$9000; T. J. O'Neil, Engr., Orlando, Fla.

Ga., Atlanta.—Southeastern Fair Assn. will construct 1-mi. speedway around lake at Lakewood. (See Misc. Enter.)

Ga., Savannah.—Chatham county voted \$375,000 bonds to construct road to Tybee, including bridges, culverts, causeways, etc.; Oliver T. Bacon, Chrmn. County Commrs. (Noted in August.)

Ky., Barbourville.—Knox County Commrs. have \$200,000 available for entire road construction; contract lately noted let to T. J. Vermillion & Son, Barbourville, for 1 section; will probably be ready within 3 weeks for bids on 3 additional sections; Thos. Hubbard, Engr. (See Machinery Wanted—Road Machinery.)

Ky., Carlisle.—Nicholas County Fiscal Court let contract Phelps, Post, Guyn & Co. of Lexington at about \$30,000 to construct Carlisle and East Union Rd., and to Games & Jones of Louisville at about \$15,000 to construct Carlisle and Parks Ferry Rd. (This supersedes recent item.)

Ky., Crittenden.—City votes Sept. 30 on \$1000 bonds to improve roads. Address The Mayor.

Ky., Louisville.—City invites bids until Oct. 4 to construct with asphalt Chestnut St. from 24th to 26th St.; Roger G. McGrath, Secy. Board of Public Works; lately noted. (See Machinery Wanted—Paving.)

Ky., Louisville.—Board of Public Works let contract Louisville Asphalt Co. at \$10,990 to pave Brook St. in front of Louisville Boys' High School with asphalt and to reconstruct with asphalt Preston St. from Jefferson to Market St.; Bickel Asphalt Paving Co., at \$5300, to pave Chestnut St. from 4th to 5th St. with wood blocks between street-car tracks, vitrified blocks for gutters and asphalt between gutters and car tracks; L. W. Hancock Co., at \$3300, to reconstruct 18th St. from Magnolia to Burnett St. and at \$250 for original construction of 32d St. from Grand to Virginia Ave., both with vitrified brick; Henry Bickel Co., at \$10,500, for original construction with vitrified brick of Dupuy from Kentucky to Caldwell St. (Call for bids lately noted.)

Ky., Somerset.—Pulaski county votes Dec. 18 on \$300,000 bonds to construct roads; W. G. Cundiff, County Road Engr. (Call for bids lately noted.)

Ky., Whitesburg.—Letcher County Fiscal Court, Henry T. Day, Judge, let contract J. J. Brady, Jackson, Ala., to build 1½ mi. road from Whitesburg toward Colley Creek, and to Nat Hale, Colson, Ky., for stretch of model roadway near Kona Station. (Lately noted.)

Ky., Williamsburg.—Whitley county will construct and improve road from Williamsburg to McCreary county line; County Court, E. F. White, Clerk, receives bids until Oct. 4; single bid for entire work; also receive bids on drain pipe. (See Machinery Wanted—Road Construction.)

La., Coushatta.—Highway Dept. Board of State Engrs., New Orleans, let contract W. E. Green, Lafayette, at \$14,900 to construct 8 mi. of road in Red River parish.

La., Donaldson.—Ascension parish votes Oct. 19 on \$50,000 bonds to construct roads in Dist. No. 1 and \$15,000 bonds to construct roads in Dist. No. 2. Address Police Jury.

La., Houma.—Terrebonne Parish, Dist. No. 1, voted \$50,000 tax levy and Dist. No. 2 voted \$100,000 to construct roads. Address Police Jury. (Lately noted.)

La., Oberlin.—Allen parish voted \$150,000 bonds to construct gravel roads in Ward 5. Address Allen Parish Police Jury.

Md., Annapolis.—Anne Arundel County Commrs. let contract Smith & Ruggles, 2680 Dulany St., Baltimore, to construct 4200 ft. State-aid roadway in 5th Dist. from Curtis Bay to Wagner's Point.

Md., Easton.—Talbot county will construct section State-aid highway upon or along Harrison St. Ext., between town limits of Easton and Talbot County Fair Grounds, 1800 ft.; concrete, macadam or shell construction; County Commrs., Jos. B. Harrington, Clerk, receive bids until Oct. 5; Frank W. Seth, County Roads Engr. (See Machinery Wanted—Road Construction.)

Md., Hagerstown.—Washington county will construct 1.89 mi. State-aid highway upon or along road leading from Indian Springs to Big Pool, and 1.10 mi. on road between Williamsport and Clearspring; County Commrs., Barry M. Hartle, Clerk, receive bids until Oct. 5. (See Machinery Wanted—Road Construction.)

Md., Salisbury.—Wicomico county will construct 2-mi. section State-aid highway upon or along Salisbury-Anderson's Mill Rd. between Salisbury and Anderson's Mill; County Commrs. receive bids until Oct. 12; H. M. Clark, Roads Engr. (See Machinery Wanted—Road Construction.)

Miss., Columbus.—Lowndes county will construct previously-noted paving, contracts to be let as follows, Oct. 13: Suprs. Dist. No. 4, 35 mi.; Artesia Road Dist., 1½ mi.; Bent Oak Road Dist., 5 mi.; all roads to be of macadam, graded, drained and surfaced with rock; Gus E. Hauser, Consult. Engr. (See Machinery Wanted—Road Construction.)

Miss., Meridian.—City let contract J. E. Wright at about \$8000 for curbing and gutters.

Mo., Hillsboro.—Jefferson county will vote on \$500,000 bonds to construct roads and bridges. Address County Commrs.

Mo., Kansas City.—Board of Public Works let contract F. P. McCormick, Kansas City, at \$4283 to construct 2383 sq. yds. asphaltic concrete paving, and to Cleveland Trinidad Paving Co., Cleveland, O., at \$5669 for 4832 sq. yds. sheet asphalt paving.

N. C., Asheville.—City will pave Gudger St. from Haywood to Hill St. Address The Mayor.

N. C., High Point.—City will pave Main St. from Thurston to English St., and S. Main St. from Commerce to Russell St.; bids received. Address The Mayor.

Okla., Pawnee.—City, H. A. Rexroad, City Clk., will construct 30,000 sq. yds. paving in business district; bids until Oct. 4; vertical fiber vitrified brick blocks with cement grout filler and sand cushion laid on concrete base; Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City. (See Machinery Wanted—Paving.)

Okla., Poteau.—City let contract J. W. Rooks of McAlester at \$13,768 to construct several blocks concrete paving.

Okla., Sapulpa.—Creek county votes Oct. 2 on \$18,000 bonds to construct roads. Address County Commrs.

S. C., Gaffney.—City let contract to pave section of Limestone St. with brick and sand; W. H. Ross, Clerk.

S. C., Gaffney.—City let contract Southern Paving & Construction Co., Chattanooga, Tenn., to pave Limestone St. from Robertson St. to intersection of Birnie and Limestone Sts.; brick and sand; 3750 sq. yds.; 325 ft. 8-in. and 18-in. concrete curb; 650 cu. yds. grading; W. H. Ross, City Clerk. (Call for bids lately noted.)

Tenn., Elizabethton.—Carter County Commissioners let contract Oliver-Hill Construction Co., Bank and Trust Bldg., Knoxville, Tenn., to construct about 65 mi. macadam graded road; first road to be between Elizabethton and Bluff City, to be part of Memphis-to-Bristol Highway; \$365,000 available; John Colwell, Engr.; M. D. Allan, Chrmn. Pike Com. (See Mch. Wntd.—Steam Shovels.)

Tenn., Jacksboro.—Campbell County Highway Commrs., H. G. Murray, Chrmn., invited bids until Oct. 2 to improve roads Nos. 2, 7 and 8.

Tenn., Knoxville.—Knox County Good Roads Com., A. I. Smith, Chrmn., 307 Holston National Bank Bldg., has indefinitely postponed letting of road work contract recently noted for Sept. 30.

Tenn., Lonsdale, Sta. No. 7, Knoxville.—City votes Oct. 30 on \$30,000 bonds for street paving, etc.; \$15,000 to be issued at present and remaining \$15,000 to be used when additional expenditure is necessary. H. E. Christenberry, Mayor.

Tenn., Memphis.—City let contract Geo. O. White & Co. at \$9011 to pave 5650 sq. yds. with concrete on Claybrook St.

Tenn., Memphis.—City contracts recently noted let to Koehler Bros.-Fowler Construction Co., 68 W. Court Ave., include tar-macadam curb and gutter on one-half Foster Ave., cost \$35,000, and 16,000 sq. yds. wood block paving at \$5,000; J. H. Weatherford, City Engr. (See Machinery Wanted—Steam Shovel.)

Tenn., Memphis.—City will improve North and South Front St. from Court to Monroe Ave., Ordinance No. 363; pavement—3650 sq. yds. wood-block pavement laid, 3650 sq. yds. stone-block pavement removed, 100 sq. yds.

stone-block pavement adjusted, 144 lin. ft. 6x20-in. radius granite curb corners furnished and set, etc.; drainage—48 lin. ft. 12-in. cast-iron pipe furnished as laid, No. 8 inlet, inlet for drop grating and drop inlet and grating removed; bids received until Sept. 28; C. C. Lashby, City Clerk; E. H. Crump, Mayor. (See Machinery Wanted—Paving, etc.)

Tenn., Newport.—Cocke county will grade and macadamize roads, expending \$150,900; Pike Com., Geo. W. Gorrell, Chrmn., receives bids until Oct. 16; work divided into 9 contracts. (See Machinery Wanted—Road Construction.)

Tenn., Shelbyville.—Bedford County will vote on \$20,000 bonds to construct roads. Address County Commrs.

Tex., Athens.—City Council authorized issuance of scrip to pave public square; bids are being received. Address The Mayor.

Tex., Athens.—City will improve streets, to include claying, graveling, concrete guttering and curbing; cost \$15,000; bids until Sept. 30; W. W. Jarrell, Mayor. (See Machinery Wanted—Paving.)

Tex., Batesville.—Zavalla County Commrs. will order election on issue of additional \$15,000 bonds for road construction.

Tex., Franklin.—Robertson county, Precinct No. 6, contemplates vote on \$100,000 bonds for road construction. Address County Commrs.

Tex., Kaufman.—Kaufman county, Terrell Road Dist., will construct gravel-macadam roads; estimated cost \$200,000; Permanent Road Commrs., M. W. Raley, Secy., Terrell, Tex., receive bids until Oct. 28; Bartlett & Ranney, Engrs., San Antonio and Dallas, Tex.; Jas. A. Cooley, County Judge, Kaufman. (See Machinery Wanted—Road Construction.)

Tex., Liberty.—Liberty county, Cleveland precinct, N. Smith, County Judge, defeated previously-noted \$200,000 bonds for road construction, to include link in Lufkin-Livingston-Houston Highway.

Tex., Lufkin.—Angelina county voted \$200,000 bonds to construct roads. Address County Commrs. (Lately noted.)

Tex., Marshall.—Harrison County Commrs. Road Dist. No. 1 let additional contract to Smith Bros., Crockett Tex., for road construction to complete \$300,000 expenditure for 60-mi. gravel and macadam roads; N. P. Turner, Marshall, Tex., Engr.; Geo. L. Huffman, County Judge.

Tex., San Antonio.—City let contract Uvalde Rock Asphalt Co. (main office, Beaumont, Tex.) at \$2200 to pave Haymarket and Market Plazas with Uvalde rock asphalt.

Tex., Sulphur Springs.—City let contract to Thogmartin & Gardner to pave Church, College, Davis and Main Sts. with vitrified brick. (City lately notified to issue bonds.)

Tex., Taylor.—City Commrs. let contract Uvalde Rock Asphalt Co. (main office, Beaumont, Tex.) to pave 35,000 sq. yds. of streets, and Kaw Paving Co. of Topeka, Kan., for \$5,000 sq. yds.; total, 120,000 sq. yds.; total estimated cost \$275,000; W. E. Dozier, Engr. (Call for bids lately noted.)

Tex., Terrell.—City will improve Francis St. from Nash Ave. to State St.; City Com. receives bids until Oct. 12; separate bids on creosoted wooden block on concrete foundation; brick pavement on concrete foundation; Ada (Okla.) or Texas rock asphalt; gravel; asphalt macadam; Hassam compressed concrete pavement; bitulithic; concrete curbs and gutters; Herbert Brewster, City Engr.; T. C. Russell, Chrmn. City Com. (See Machinery Wanted—Paving.)

W. Va., Buckhannon.—Upshur county votes Dec. 30 on \$250,000 bonds to construct roads. Address County Commrs.

W. Va., Morgantown.—Monongalia county, Morgan Dist., voted \$300,000 bonds to improve all main roads leading into Morgantown. Address County Commrs. (Noted in Aug.)

W. Va., Moundsville.—City will construct brick pavement and cement curb on sections of Grant Ave. and 4th St.; also to pave with brick sections of Lockwood and Western Aves. and 7th St.; O. B. Bonar, City Clerk, invites bids until Oct. 11; Alex. Purdy, City Engr. (See Machinery Wanted—Paving.)

W. Va., Piedmont.—City defeated \$85,000 bonds to pave streets. (Lately noted.)

SEWER CONSTRUCTION

Fla., Miami.—City voted \$50,000 bonds to pay city's share of cost of constructing sanitary sewers; contracts for sewer construction were previously let and contractors have been ordered to proceed with work; largest contract is for 8, 10 and 12-in. sewers on Biscayne Drive, for which J. J. Quinn Co.

has contract at about \$25,000; Quinn Co. and Duvall & Ashworth also have contracts for sewers in Riverside, etc.

Ga., Atlanta.—City postponed election and will probably vote in spring on \$3,550,000 bonds for municipal improvements as follows: \$1,000,000 for sewers and disposal plants; \$750,000 for water-works improvements; \$1,000,000 for schools; \$133,000 for motorizing fire department; \$100,000 for cyclorama building; \$375,000 for Grady Hospital; R. M. Clayton, Ch. of Constr. (Lately noted.)

Ga., Helena.—City voted \$12,000 bonds to construct sewer system. Address The Mayor. (Lately noted.)

Md., Baltimore.—City will build sand bed and concrete channel at sewage-disposal works, Sanitary Contract No. 163; 350 cu. yds. excavation, 450 cu. yds. embankment, 2800 cu. yds. sand for sand bed, 7700 lbs. reinforcing steel, 3100 lin. ft. 4-in. unglazed tile, etc.; Board of Awards receives bids until Oct. 13; Chas. England, Chrmn. Sewerage Com. (See Machinery Wanted—Sewer Construction.)

Md., Betterton.—D. V. Ault, 65 Kneckerbocker Bldg., Baltimore, Md., is lowest bidder at \$1062.75 on storm-water drain construction; Kastenhuber & Anderson, Engrs., Easton, Md. (Bids lately noted.)

Mo., Alton.—City is having plans prepared for east and west end trunk sewers. Address The Mayor.

Mo., Joplin.—City invites bids until Sept. 28 to relocate East Joplin public sewer estimated to cost \$126,500, and until same date to construct storm sewer on D St. from Joplin to Main St.; J. B. Hodgdon, Commr. of Streets and Public Improvements. (See Machinery Wanted—Sewer Construction.)

Mo., St. Louis.—City let contract Alfred Lewald at \$5431 to construct sewer in Harlem Creek Sewer Dist. No. 12, at \$7879 in Dist. No. 13, and at \$5920 for sewers in Penrose Joint Dist.; to Geo. G. Prendergast Construction Co. at \$37,377 for sewers in Baden Sewer Dist. No. 2.

N. C., Albemarle.—City, M. J. Harris, Mayor, asks bids until Oct. 15 to construct lately-noted sewer system; about 4 mi. 6 to 20 in. diam. vitrified and cast-iron sewers; J. D. Spinks, Engr. in charge; Anderson & Christie, Consult. Engrs., Charlotte, N. C. (See Machinery Wanted—Sewer System.)

N. C., Ayden.—City let contract J. B. McCrary Co., Atlanta, Ga., to construct sewer system; voted \$15,000 bonds. (Lately noted.)

N. C., Hertford.—City will construct sanitary sewer and water system; will receive bids on materials, including pumps, piping, motor, etc., until Oct. 12; Engr., J. B. McCrary Co., 1408 Third National Bank Bldg., Atlanta, Ga.; bonds previously noted. (See Machinery Wanted—Water and Sewer System Materials.)

Okla., Cushing.—City voted lately-noted \$30,000 bonds for sewer construction; Engr., Benham Engineering Co., Oklahoma City, will now submit plans and specifications.

Okla., Marlow.—City defeated \$15,000 bonds to construct main sanitary sewer system; Benham Engineering Co., Engr., Colcord Bldg., Oklahoma City. (Lately noted.)

Tex., Gatesville.—City employed engineer to make preliminary surveys and report cost of installing sewer system; contemplates bond issue.

Tex., Houston.—City will construct sewerage-disposal system to embrace 2 disposal plants, each to be located on tract of about 25 acres; system will include pipe lines and pumping plants; also involve rebuilding of Willow St. pumping plant; electric-driven centrifugal pumps; E. E. Sands, City Engr.

Tex., Houston.—City will construct storm sewers on San Jacinto St. from Capitol to Rusk Av., Hathaway St. from Baldwin to Crocker St. and Garrett and Ross Sts. from West Alabama to Jack St.; bids at office of City Secy. until Oct. 11; E. E. Sands, City Engr.; Ben Campbell, Mayor. (See Mch. Wntd.—Sewer Construction.)

Tex., San Benito.—City will construct sewerage-disposal plant; V. M. Ehlers, State Engr., Austin, is preparing plans.

Tex., Santa Anna.—City retained Bradshaw & Enbank, Brownwood, to prepare plans for sewer system.

Va., Richmond.—Administrative Board adopted resolution asking City Council to provide bond issue of \$188,915 to complete sewer system in old Manchester.

Va., Richmond.—Administrative Board let contract C. M. Henley at \$3008.40 to construct sewer adjacent to Shockoe Creek, and at \$1499.63 to construct sewer for section of Church Hill and extreme northeast; A. W. Maynard at \$2744.68 to construct sewer in Fulton.

TELEPHONE SYSTEMS

Ark. Hughes.—Beck Telephone Co. organized with J. O. E. Beck, Prest. Hughes; R. H. Polk, V.P., Memphis, Tenn.; T. R. Porter, Secy-Treas. Hughes; will construct telephone system from Memphis, Tenn., to Hughes, 30 mi.

Okla., Fort Cobb.—Washita Telephone Co., capital \$2000, inceptd. by C. Ludwick, P. L. McClure and M. C. Ludwick.

TEXTILE MILLS

Ky., Louisville.—Knitting Yarn.—Sterling Spinning Co. will install additional machinery.

Miss., Enterprise.—Cotton Goods.—Stonewall Cotton Mills will install sixty 40-in. automatic looms in Mill No. 2.

N. C., Albemarle.—Cotton Yarn.—Wiscasset Mills Co., J. W. Cannon, Prest., Concord, N. C., is reported to build additional mill costing \$500,000; now has 65,000 ring spindles, 16,000 twister spindles, 200 cards, etc.; not ready to make any announcement.

N. C., Albemarle.—Cotton Yarn.—Eldred Mfg. Co., J. W. Cannon, Prest., Concord, N. C., is reported as to build additional mill costing \$500,000; now has 25,000 ring spindles, 500 twister spindles, 126 cards, etc.; not ready to make any announcement.

N. C., Belmont.—A. C. Lineberger, Prest. of Imperial Yarn Mills and three other cotton-manufacturing companies, and associates will organize \$300,000 company to build cotton-yarn mill. (Imperial Yarn Mills' officials lately reported to organize this company.)

N. C., Granite Falls.—Falls Mfg. Co. let contract Elliott Building Co., Hickory, N. C., to construct 288x75-ft. building of brick and concrete construction, costing about \$40,000; to install 5000 spindles, 250 H. P. steam-power equipment, etc., costing \$80,000, etc. (Organization, plans, etc., recently mentioned.)

N. C., Hendersonville.—Hosiery.—James P. Grey & Son will establish knitting mill; build 80x50-ft. brick with stone foundation mill structure and 76x22-ft. frame with stone foundation dyehouse, etc.; install 39 to 49 knitting machines, small unit electric motors, etc., costing about \$9000; daily capacity 200 doz. prs. seamless hosiery; J. E. Sirrine, Engr.-Archit., Greenville, S. C. (Lately mentioned.)

W. Va., Philippi.—Woolen Blankets.—Philippi Woolen Mills Co. organized; John A. White, Prest.; A. G. Jenkins, V.P.; Waitman D. Corder, Secy-Treas.; will construct 2-story 100x60-ft. brick building costing \$800; install machinery for manufacturing woolen blankets, costing \$10,000; 100 H. P. steam-power plant. (Previously reported inceptd. with \$25,000 capital stock, etc.)

WATER-POWER DEVELOPMENTS

N. C., Granite Falls.—Granite Falls Mfg. Co. has plans and specifications for concrete work in connection with raising dam; 3000 yds. concrete, 30 per cent. to be reinforced; let contract Oct. 5; plans, etc., on deposit of \$25 at 902 Realty Bldg., Charlotte, N. C., and office A. A. Shuford, Hickory, N. C.; Tucker & Laxton, Engrs., 900 Independence Bldg., Charlotte. Granite Falls Co. lately noted to build 45-foot dam, change cotton-mill power to electricity throughout, etc. (See Machinery Wanted—Concrete Work.)

WATER-WORKS

Ark., Argenta.—City Council created Water-works Improvement Dist. No. 1 and will issue \$500,000 bonds to purchase Arkansas Water Co.'s plant and pipe line, enlarge and extend mains and place additional fire hydrants; Jas. P. Faucette, Mayor. (Lately noted.)

Ark., Morrilton.—Arkansas Light & Power Co., Arkadelphia, Ark., purchased systems of water and electric companies of Morrilton; will improve and operate.

Ark., Stuttgart.—City organized Improvement district to acquire water and electric-light plants. Address The Mayor.

Ga., Atlanta.—City postponed election and will probably vote in spring on \$750,000 bonds for water-works improvements. R. M. Clayton, Ch. of Construction. (Lately noted.)

Ga., Helena.—City voted \$8000 bonds to construct water-works. Address The Mayor. (Lately noted.)

Ga., Wadley.—City, T. B. Johnson, Mayor, will construct water system; plans have been submitted; work by Singleton-Smith Co., Macon, Ga.

La. Gretna.—S. R. Sutherland & Co. of Kansas City, Mo., are lowest bidders at \$46,830 to

construct water system to connect with municipal system of Algiers; Frank T. Payne, City Engr. (Lately noted.)

Miss., Natchez.—Walter Springs Water Co., capital \$10,000, inceptd. by D. H. Britton, C. F. Engle and others.

Mo., Eldorado Springs.—City defeated \$150,000 water-works bonds. O. E. Siders, City Clerk. (Lately noted.)

N. C., Ayden.—City let contract J. B. McCrary Co., Atlanta, Ga., to construct water-works; voted \$20,000 bonds. (Lately noted.)

N. C., Hertford.—City will construct water-works and sanitary sewer system; includes 60,000-gal. steel tank on 75-ft. tower, pipe, hydrants, valves, etc.; bids on materials until Oct. 12; Engr., J. B. McCrary Co., 1408 Third National Bank Bldg., Atlanta, Ga.; bonds previously noted. (See Machinery Wanted—Water and Sewer System Materials.)

S. C., Orangeburg.—City Council authorized Jas. E. Salley, City Electrician, to prepare plans and specifications for enlarging and extending water-works and electric-light plant; Edward Hawes, Jr., City Engr., will supervise engineering work; has machinery to be removed to new plant; also purchase additional equipment; estimated cost \$50,000. (Reported in July to have voted \$15,000 bonds for water-works and \$15,000 for electric-light plant.)

Tex., Beeville.—City is reported as contemplating expenditure of \$20,000 to \$30,000 to construct water-works. Address The Mayor. (Lately noted.)

Tex., Galveston.—City Comms. authorized A. T. Dickey, City Engr., to invite bids to construct 30-in. cast-iron submerged water main across part of Galveston Bay, to be laid alongside present submerged main and connected to that part of old main which is in good condition; length, 3600 lin. ft.; estimated to require 300 tons flexible joint cast-iron pipe, cost \$12,500; 540 tons standard cast-iron pipe, cost \$12,500; 4 special bends, cost \$160; excavation, back filling, laying pipe, cofferdams and lead, cost \$14,000; 6 warning signs, cost \$1300; total estimated cost, \$41,230; bids until Oct. 14; city to furnish pipe fittings and specials; John D. Kelley, City Secy.; lately noted. (See Machinery Wanted—Water Main.)

Tex., Slaton.—City voted \$10,000 bonds for water-works. Address The Mayor.

Va., Mineral.—City contemplates constructing water-works and electric-light plant. Address The Mayor.

WOODWORKING PLANTS

Ark., Bald Knob.—Crates.—Moore Crates Co., capital \$10,000, inceptd. by R. P. Moore, W. B. Beckwith, T. J. Campbell and others.

Ky., Louisville.—Tables.—Voss Table Co., 16th and Abegust Sts., has plans for brick addition to factory; 1 story; 900 sq. ft. floor space; install special equipment for finishing, including power-driven sprayers and rubber.

La., Lake Charles.—Boxes, etc.—National Coop & Box Co. organized with S. A. Cummings, Prest.; to manufacture folding crates, etc.; proposed daily capacity 1900 coops and boxes.

Miss., Beaumont.—Veneers.—Beaumont Veneer Works, J. H. Overstreet, owner, will rebuild plant (of Beaumont Veneer Co.) lately noted burned; cost of new plant about \$24,000, including drykiln, dry sheds and drying racks; contract let, on percentage basis, to W. P. Craft of Craft Bros., Ellaville, Miss.; machinery and supplies have been purchased; will manufacture box veneer, rotary cut, also peach-basket cover stock, mainly of red gum; owns timber.

S. C., Drake.—Veneer.—Pee Dee River Veneer Co., capital \$2500, inceptd. by C. S. Whipple and W. A. Stillely.

Tex., San Antonio.—Refrigerators and Billiard Tables.—Ed. Friedrich, Propr. Billiard Table & Refrigerator Plant, 802 E. Commerce St., contemplates building \$60,000 factory.

FIRE DAMAGE

Ala., Attalla.—Dr. J. P. Stewart's residence on Fifth Ave.; loss \$5000.

Ala., Birmingham.—Starr Furnace & Foundry Co.'s foundry; loss \$2500.

Ala., Eufaula.—Mercer Drayage Co.'s barns.

Ala., Huntsville.—Mrs. Sarah Searcy's residence, loss \$4000; Tom Phillips' residence, loss \$3000.

Ala., Montgomery.—Dr. B. J. Baldwin's building at 6 Dexter Ave.; loss \$5000.

Ark., Rector.—W. C. Meredith & Co.'s store; loss \$7000.

Fla., New Smyrna.—Mrs. J. P. Dittson's buildings, loss \$6000; Ashton & Saxon's building, loss \$5000.

Fla., Pensacola.—St. Paul's Church (address The Pastor); Lee Daniell's residence; H. P. Drew's residence.

Fla., Tampa.—Wm. Y. Hatzlip's residence at 507 Osceola Ave., Seminole Heights; loss \$4000.

Ga., Centralhatchee, R. D. from Franklin.—Dr. A. G. Wortham's gin.

Ga., Monticello.—Cotton gin of Calvin Gin Co. of Calvin, Ga.; estimated loss \$3000.

Ga., Ocala.—Prof. J. R. York's residence; loss \$3000.

Ky., Bowling Green.—Dr. Wm. Siddens' stock farm, dwelling and several outhouses.

Ky., Burkesville.—J. O. Ewing's building, occupied by J. E. Jones and Frank Baker; L. L. Cary's building, occupied by Gainesboro Telephone Exchange; C. C. Baker's livery barn, leased to Dr. W. O. Keen; Christian church (address The Pastor); J. O. Ewing's restaurant; loss \$20,000.

Ky., Cloverport.—Wash Payne's residence and store.

Ky., Crandall.—Henry Fisher's 2 barns, silo and outbuildings; loss \$5000.

Ky., Leitchfield.—Robt. McClure's residence.

Ky., Madisonville.—Wm. Bassett's tobacco barn.

Ky., Mt. Vernon.—Building occupied by Brown Bros., W. A. McKinney and Davis Livery Stable.

Ky., Murray.—John Ward's residence.

Ky., Pineville.—N. J. Weller's buildings; loss \$9000.

La., Crowley.—H. H. McMaster's residence 4 miles from Crowley; loss \$5000.

Md., Cumberland.—East End Hotel, owned by Mrs. Chairo Carlo, Hobsopple, Pa.; loss about \$3000.

Md., Federalburg.—Thos. E. Evernam's cannery and warehouse.

Md., Highfield.—Maryland Hotel, owned by Benjamin Shockey, Waynesboro, Pa., and occupied by Charles Corvalli, Jr.; loss \$10,000.

Miss., Enterprise.—John Kamper's residence, occupied by George Mason.

N. C., Fayetteville.—W. F. Smith Fruit Co.'s building; loss \$10,000.

N. C., Hewitts.—North Carolina Tale & Mining Co.'s plant on Nantahala River.

N. C., Weldon.—Paper Product Co.'s plant; loss \$40,000; building was owned by Garrett & Co. of Norfolk, Va.

S. C., Charleston.—Charleston Fair and Racing Assn.'s grandstand, paddock and judges' stand at Palmetto Park; loss \$30,000 to \$40,000.

S. C., Johnston.—Stonewall Neal's cotton gin; loss about \$5000.

S. C., Leeds.—C. B. McCallum's sawmill and gin.

S. C., Sumter.—J. B. Goldman's residence, owned by McCallum Realty Co.

Tenn., Johnson City.—Thurman Hughes' residence.

Tenn., Lenoir City.—John M. Soward's planing and shingle mill; loss \$2500 to \$3500.

Tenn., Nashville.—J. M. Lynn's residence at 1204 Paris Ave.; loss \$3000.

Tenn., St. Elmo.—Robert Scholze warehouse; loss on building \$4000.

Tenn., White Bluff.—Hotel Maplewood, owned by Virgil Eatherly; loss \$3000.

Tex., Avery.—Buildings of W. H. Cox, Mrs. Beulah Campbell, Swann & Myers, Joe Bearden and W. D. Butler.

Tex., Ennis.—R. J. Caldwell's barn; loss \$2000.

Tex., Temple.—A. B. Crouch & Co.'s grain elevator.

Va., Norfolk.—Fosburgh Lumber Co.'s 13 dry kilns and lumber; estimated loss, \$150,000.

Va., Richmond.—Leroy R. Brewster's residence on Broad Rock Springs Co.'s property in Chesterfield county.

W. Va., Logan.—Miss Cora J. White's residence on Broad St.; loss \$7000.

COLLAPSED

Ark., Little Rock.—Building at 613 Water St., occupied as stable by Wells Fargo & Co. Express, and M. M. Cohn & Co., and owned by Ira B. Davis, 2412 Schiller Ave.; loss \$10,000.

DAMAGED BY EXPLOSION

Okla., Ardmore.—Station occupied by Gulf, Colorado & Santa Fe R. R. (F. Merritt, Ch. Engr., Galveston, Tex.), St. Louis & San Francisco (V. K. Hendricks, Ch. Engr., St. Louis) and Chicago, Rock Island & Pacific Ry. (C. A. Morse, Ch. Engr., Chicago); Chicago, Rock Island & Pacific Ry's freight station; Whittington Hotel.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Fla., St. Augustine.—Robert Mills will erect 16-room addition and convert residence into apartments.

Ga., Atlanta.—Morris & Morris, 525 Atlanta National Bank, Atlanta, prepared plans for apartment-house; 2 stories and basement; brick veneer; tar and gravel roof; tile roof at entrance; 5 suites of 3 to 5 rooms; steam heat; electric lights; gas stoves; refrigerators; owner's name withheld.

Mo., Kansas City.—W. H. Reed will erect business and apartment building. (See Stores.)

Mo., Kansas City.—Crescent Realty Co. will erect business and apartment building. (See Stores.)

Mo., Kansas City.—A. D. Arnold will erect brick flat at 2917-19 Wyandotte St.; cost \$8000.

Mo., St. Louis.—A. Koberman will erect 2-story tenement-house at 3718-20 Bamberger St.; cost \$5500; construction by owner.

Mo., St. Louis.—Veronica Realty Co. will erect store and tenement-house. (See Stores.)

Mo., St. Louis.—Vincent A. Chinberg will erect apartment-house on Lafayette Ave.; 2 suites of 3 rooms each; brick; hardwood floors.

N. C., Chapel Hill.—S. J. Brockwell will erect theater with upper floor for students' rooms. (See Theaters.)

Okla., Tulsa.—Nanna Arnold will erect 2-story brick apartment-house at 405 S. Cheyenne Ave.; cost \$7500.

Tenn., Morristown.—T. J. Bostwick, S. P. Harris, Agt., will erect apartment-house on W. Main St.; 2 stories and basement; 20 rooms; brick; cost about \$10,000; bids opened Oct. 10. Address Mr. Harris.

Tex., Waco.—F. E. McLarty will erect addition at rooming-house at 9th and Washington Sts.; 8 rooms; frame; shingle roof; electric light; cost without mechanical equipment about \$2500; construction by owner. (Lately noted under Stores.)

Va., Norfolk.—W. H. Hofheimer, M. E. Hunter and others acquired Rountree property on Freemason St. and will convert into apartments; 4 stories; also erect 2-story garage equipped with elevator; cost about \$30,000.

Va., Richmond.—L. J. Heindl will erect 2-story brick tenement-houses on Robinson St.; cost \$7630.

ASSOCIATION AND FRATERNAL

D. C., Washington.—American Federation of Labor opened bids to erect office building at 9th St. and Massachusetts Ave.; R. P. Whitty Co., 467 17th St. S. W., Washington, is lowest bidder; plans by Milburn Helster & Co., Union Savings Bank Bldg., Washington, call for building 5 stories; 60x100 ft.; steel, stone and brick; slag roof; concrete slab floor. (Noted in August.)

Ky., Louisville.—Suburban Lodge, A. F. & A. M., will erect lodge building and theater. (See Theaters.)

Ky., Mayfield.—B. P. O. E. will erect lodge building at 8th and North Sts.

N. C., Albemarle.—Wiscasset Mills Co. and Eldred Mfg. Co. will erect Y. M. C. A. and gymnasium for mill operatives.

S. C., Camden.—Henry Savage will erect building for Masonic lodge rooms, etc. (See Bank and Office.)

S. C., Rock Hill.—Rock Hill Lodge, A. F. & A. M., will erect building; 4 stories; first 3 floors for hotel of about 35 rooms; upper floor for Masonic Temple; cost \$30,000 to \$35,000.

Tex., Pearsall.—A. F. & A. M. have plans by Ralph H. Cameron, San Antonio, for Masonic Temple, store and office building; 3 stories; reinforced concrete frame faced with brick and backed with hollow tile; cost \$11,000; construction begins by Oct. 1; lower floor for store, second floor for offices and upper floor for lodgerooms. (Lately noted.)

Va., Richmond.—Richmond Lodge, B. P. O. E., plans to rebuild and improve lodge building.

Va., Richmond.—Central Trades and Labor Council is promoting organization of company with \$25,000 capital stock to erect labor temple at 5th and Marshall Sts.; R. T. Bowen, Pres.; W. C. Crozier, Secy.-Treas. of Com.

W. Va., Alderson.—A. S. Russell will erect building for Masonic Temple, etc. (See Theaters.)

BANK AND OFFICE

Ala., Oneonta.—Frank Holcombe will erect store and office building. (See Stores.)

D. C., Washington.—Carroll Electric Co. has plans for office and store building. (See Stores.)

Fla., Clearwater.—Bank of Clearwater, D. F. Conoley, Pres., will increase capital stock from \$50,000 to \$150,000 and erect bank building at N. Harrison Ave. and Cleveland St. to cost about \$35,000.

Fla., Tampa.—Robt. Muggie is reported contemplating erecting office building at Franklin and Jackson Sts.

Fla., Tampa.—A. J. Knight plans to erect office building at Franklin and Lafayette Sts.; 12 stories; plans yet indefinite; Bonfoey & Elliott, Archts., Tampa.

Ga., Rome.—A. Ten Eyck Brown, Archt., Forsyth Bldg., Atlanta, is reported conferring with capitalists relative to erection of office building.

Ky., Pineville.—N. R. Patterson and E. N. Ingram will erect office building; 2 stories; brick.

S. C., Camden.—Henry Savage, Camden, and Jos. B. Crocker, Boston, Mass., will erect bank, office, store and lodge building; 3 stories; lower floor for store and bank; second floor for 19 offices; third floor for Masonic lodge rooms; 50x140 ft.; garage separate from main building; let contract for brick to Camden Brick Co.; R. W. Mitcham, Archt., Camden.

Tenn., Loudon.—Bank of Loudon will erect 2-story brick building; fireproof.

Tenn., Nashville.—Bernstein Co. has plans by C. K. Colley, Nashville, to remodel building at 512 Church St. for offices for doctors; will install electric elevator, etc.; cost \$10,000 to \$15,000.

Tex., El Paso.—Landers Lumber Co. will erect brick office and warehouse at 1700 Texas St.; 30x60x16 ft.; cost \$50,000.

Tex., Galveston.—Brush Electric Co. and Galveston Gas Co., 2420-22 Market St., will remodel and improve offices under supervision of A. J. Bellis, Archt., Galveston; provide front, electric fixtures, construct stairway through center of building and vestibule flanked on either side with plate-glass windows; cost \$10,000.

Tex., Lockhart.—Lockhart State Bank will remodel bank building; cost about \$6000; Louis Neob is lowest bidder.

Tex., Pearsall.—A. F. & A. M. have plans for office, store and lodge building. (See Association and Fraternal.)

Va., Newport News.—Newport News Shipbuilding & Dry Dock Co. will erect administration building, etc. (See Miscellaneous.)

W. Va., Alderson.—A. S. Russell will erect building for offices, etc. (See Theaters.)

W. Va., Bluefield.—First National Bank is reported to erect bank and office building; 3 or 4 stories.

W. Va., Charleston.—People's Exchange Bank acquired building at Capitol and Virginia Sts.; will convert into 1-story bank building.

W. Va., Huntington.—C. L. Ritter and Geo. F. Miller will not let contract to erect 7-story extension to Valentine Bldg. at 4th Ave. and 10th St., but will have work done under direct supervision of I. A. Rhodes and Verus T. Ritter, Archts., Huntington; plans call for fireproof construction; concrete floors with wood top; composition roof; elevators; cost about \$60,000; will be occupied by banking quarters and offices; plans being revised; architect will take subbids on material and award subcontracts direct for work. (Lately noted under Stores.)

CHURCHES

Ala., Oneonta.—Methodist Church will erect building; brick. Address The Pastor.

Ark., Germania.—Methodist church, Rev. Jas. McNabb, pastor, acquired residence and will convert into church.

Ark., Gillett.—German Lutheran church will erect \$6000 building; construction begun. Address The Pastor.

Ark., Pine Bluff.—Catholic church, Rev. P. Enright, pastor, is reported having plans prepared by Frank M. Blaiswell, Little Rock, for building to cost about \$50,000; foundation started about a year ago, but construction deferred.

Ky., Lexington.—Broadway Christian Church plans to erect building. Address The Pastor.

Ky., Perryville.—Baptist Church will erect Sunday-school annex and improve building. Address The Pastor.

Md., Baltimore.—St. Katherine Church, Rev. W. M. Clements, pastor, Preston St. and Minebank La., is reported having plans prepared by Francis E. Torney, 813 Newington Ave., Baltimore, for building to replace present one at E. Preston St. and Minebank La. (Mr. Torney previously noted preparing plans for church building.)

Md., Baltimore.—Sacred Heart R. C. Church is having plans prepared by Baldwin & Pennington, 601 Professional Bldg., Baltimore, for building on Smith Ave., Mt. Washington; 1 story and basement; stone and frame; tile roof; wood floor; steam heat; electric light; cost about \$35,000; plans ready about Oct. 15.

Miss., McComb.—First Baptist Church has plans by Jas. E. Greene, 508 American Trust Bldg., Birmingham, Ala., to erect Sunday-school building; cost \$8000. Address L. Z. Dickey, Chrmn. of Com., McComb.

Mo., Joplin.—Byers Avenue M. E. Church plans to erect Sunday-school addition; cost \$8000 to \$10,000. Address The Pastor.

N. C., Salisbury.—Holmes Memorial Church, Rev. G. W. Vick, pastor, will erect building.

Okla., Edmond.—Baptist Church, Rev. H. J. Ridings, pastor, will erect building; 4x63 ft.; Greek mission style; portico 5x20 ft.; seating capacity, 600; cost about \$7000.

Tenn., Chattanooga.—Congregational church, Rev. C. H. Myers, pastor, is considering erecting building; cost about \$50,000.

Tenn., Lenoir City.—Methodist Episcopal Church South plans to improve and erect addition to building; John W. Russell, G. W. Jackson, H. N. Curd and J. R. Browder, Bldg. Com.

Tenn., Loudon.—Methodist Episcopal Church South, Rev. J. H. Wagner, pastor, will remodel building; will erect addition to cover 1630 sq. ft. space.

Tex., Fort Worth.—Jewish Congregation Beth-El will erect temple; competition plans for brick building to cost about \$3000; bids opened about Nov. 25; Sam Davidson, Sam Levy and others, Com.

Va., Richmond.—Highland Park Methodist Church will erect Sunday-school building; brick; cost about \$15,000; later erect church proper; brick; cost \$25,000. Address The Pastor.

Va., Roanoke.—Roanoke Christian Science Church acquired building and will convert into temporary auditorium; will erect permanent structure in spring. Address The Reader.

W. Va., Bethany.—Presbyterian Church is not having plans prepared by W. H. Nicklas, 1900 Euclid Ave., Cleveland, Ohio, for building as lately reported.

CITY AND COUNTY

D. C., Washington.—Fire Station.—Board of Commrs., 309 District Bldg., receives until Oct. 25 bids to erect building on New Jersey Ave. between D and E Sts. N. W., building for Truck Co. No. 1; plans and information to be had of Chief Clerk, 427 District Bldg. (Previously noted having appropriation of \$55,000.)

Fla., West Palm Beach.—Jail.—Palm Beach County Commrs. receive bids until Oct. 12 for material and labor to construct 5 additional cells and corridors in jail; plans and specifications at office of Geo. O. Butler, Clerk of Board.

Ga., Atlanta.—Cyclorama.—City repealed ordinance providing for election Sept. 30 on \$100,000 bonds for cyclorama. (See Schools.)

Ga., Savannah.—Reformatory.—Chatham county voted \$50,000 bonds for reformatory and \$25,000 bonds for improvements at county farm; Albert Wyly and others, Commrs. (Lately noted.)

Tex., Alice.—City Hall.—City will erect 2-story brick city hall at Wright and 1st Sts. Address The Mayor.

Tex., Houston.—Fire Stations.—City Secy. receives bids until Oct. 4 to erect 1, 2 or 3 buildings for fire stations; specifications and information at office of City Archt.; Ben Campbell, Mayor. (Lately noted to cost \$7000 to \$8000.)

Va., Staunton.—Jail.—Augusta county is having plans prepared by T. J. Collins & Sons, Staunton, to remodel jail; will extend rear wall 25 ft., install improved ventilating, heating and plumbing systems, tiers of cells separated by corridor; cost \$18,000; T. M. Smiley, John G. Fulton, Dr. C. T. Lewis and others, Com.; requires approval of City Council. (Noted in July.)

COURTHOUSES

Ga., Savannah.—Chatham county voted \$50,000 bonds to erect addition to courthouse; Albert Wyly and others, Commrs. (Lately noted.)

La., Point a la Hache.—Plaquemine parish has completed reconstruction of courthouse lately noted.

Tex., El Paso.—El Paso County Commrs. have plans by Frost & Frost, El Paso, for courthouse and will open bids Nov. 9 for erection; 5 stories, with jail on roof and basement with 18-ft. ceiling; 25x124 ft.; brick and terra-cotta; courtroom walls hard plaster; other walls plain plaster cork floors in all courtrooms; refrigerating plant; electricity generated in building; air-washing process for cooling and heating offices; sanitary drinking fountains; private elevator for sheriff, 4 passenger elevators and 1 freight elevator; ice manufacturing equipment; laundry, kitchen, hospital, padded cells for insane on fifth floor; auditorium to seat 600; cost about \$400,000; separate bids for courthouse proper, auditorium and power plant. (Noted in July.)

Tex., Wichita Falls.—Wichita County Commrs. are considering election on bonds to erect courthouse.

W. Va., Charleston.—Kanawha County Commrs. receive bids at office of David Dick & Son, Archts., No. 24 Citizens' National Bank Bldg., Charleston, to erect addition to courthouse; plans and specifications at office of County Commrs. at the Courthouse and architects as above. (Noted in June.)

DWELLINGS

Ala., Attalla.—C. R. Shepherd opens bids Oct. 1 to erect dwelling on 5th Ave.; 50x60 ft.; frame; slate-surfaced shingle roof; hardwood floor; hot-air heat; cost about \$5000; W. B. Goza, Archt. Address owner. (Lately noted.)

D. C., Washington.—D. J. Dunigan, 220 Bond Bldg., will erect 4 dwellings at 1135 19th St. N. W.; 2 stories; brick; cost \$10,000; construction by owner.

D. C., Washington.—Harry Harlan, 1315 Clifton St. N. W., will erect dwelling at 5329 42d St. N. W.; 2 stories; tile; cost \$4000; construction by owner.

D. C., Washington.—Chas. J. Walker, 216 Corcoran Bldg., has plans by W. R. Talbott, 1314 F St. N. W., Washington, for 4 dwellings at 1518-24 Buchanan St. N. W.; 2 stories; brick; cost \$14,000; construction by owner.

D. C., Washington.—Winfield Preston, 1715 8th St. N. W., has plans by Hunter & Bell, Southern Bldg., Washington, for 6 dwellings at 429-17 7th St. N. W.; 2 stories; brick; cost \$19,000; construction by owner.

D. C., Washington.—W. S. Phillips, 1409 New York Ave. N. W., has plans by Geo. T. Santmyers, 216 Kenos Bldg., Washington, for 8 dwellings at 1901-15 Kenyon St. N. W.; 2 stories; brick; cost \$40,000; construction by owner.

Fla., Jacksonville.—John Sandwick will erect 2-story frame residence on Powell place.

Fla., Jacksonville.—J. E. Rainey will erect 2-story frame residence on College Ave.; cost \$3000.

Fla., Orlando.—J. F. Ange will erect frame residence.

Fla., St. Petersburg.—Harry F. Hartwick, 4th Ave. North, will erect residence on 5th St.

Fla., St. Petersburg.—G. B. Cook, Wood St. Philadelphia, Pa., is reported to erect 2 residences on 5th Ave.

Ga., Dallas.—Dr. M. T. Marchman will erect 8-room bungalow.

Ga., Macon.—Murphy & Taylor will erect 6-room brick bungalow on Courtland Ave.

Ga., Newnan.—Wagner & Cooksey, Archts., 1208 Fourth National Bank Bldg., Atlanta, are preparing plans for residence for client

whose name is withheld; frame; colonial style; 7 rooms; shingle roof; hardwood floors; tile porches and baths; steam heat; cost \$5000.

Ga., Whitesburg.—W. T. Jones is having plans prepared by Wagener & Cooksey, 1208 Fourth National Bank Bldg., Atlanta, for residence; 2 stories; frame; 8 rooms and sleeping porches; probably hardwood floor; cost \$6000.

Ky., Louisville.—M. J. Carey will erect brick dwelling at 1210 S. Jackson St.; cost \$3000.

Ky., Mt. Sterling.—Steve Pieratt will erect brick residence.

La., Lake Charles.—J. G. Fournet will erect 2 brick residences at Hodges and Iris Sts.; cost \$3000 to \$4000.

La., Lake Charles.—Jack Ryan will erect cottage at Louisiana and Mill Sts.; cost \$4700.

Md., Baltimore.—John J. Carlin, 215 St. Paul St., will erect 12 dwellings on Reisterstown Rd. near Norfolk Ave.; 2½ stories; 21.8x37 ft.; frame; cost \$30,000.

Md., Baltimore.—Frank O. Singer, Jr., 600 Equitable Bldg., Baltimore, will erect 3 dwellings on Chaucery Ave. near Brookfield Ave.; 16x35 ft.; 2 stories; cost \$18,000; W. B. Gerwig, Archt., 600 Equitable Bldg., Baltimore; construction by owner.

Md., Baltimore.—Murray & Haynes, 307 Chelsea Ave., have plans by M. H. Haynes, same address, for dwelling at 298 Allendale St.; 2½ stories; 26x43 ft.; frame; slate roof; hot-water heat; cost \$3500; construction by owner.

Md., Baltimore.—M. Filmore Carter, Longwood Rd. near Belmont Ave., has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 16 dwellings at Hilton and Mulberry Sts.; 2 stories; 14.6x19 ft.; brick; slag roof; steam heat; cost \$32,000; construction by owner.

Md., Glen Echo.—Alberto and Sara B. Godoy, 303 Riggs Bldg., Washington, D. C., are reported having plans prepared by C. M. Moore, 3503 Wisconsin Ave. N. W., Washington, for dwellings at Glen Echo Heights and Spalding Heights.

Md., Stevenson.—Hyland P. Burns, V.P. of Maryland Casualty Co., Baltimore, Md., is having plans prepared by Laurence H. Fowler, 347 N. Charles St., Baltimore, for residence in Green Spring Valley.

Md., Wardour Station (not a P. O.).—Carrily H. Bryan is having plans for dwelling revised; 33x42 ft.; 2½ stories; fireproof; hollow tile; stucco; slate roof; tile and hardwood floor; steam heat; electric light; plans ready about Oct. 1; will ask for new bids; Theo. Wells Pietsch, Archt., 1229 American Bldg., Baltimore. (Previously noted.)

Miss., Natchez.—Company is being organized with \$10,000 capital stock by D. H. Britton, C. F. Engle and Raphael DeMarco to develop Walker Springs; will erect cottage, dance pavilion and residence for custodian.

Mo., Kansas City.—W. B. Lincoln will erect 2-story frame dwelling at 43 W. 33d St. Terrace; cost \$8000.

Mo., Kansas City.—Willard P. Hovey has plans by Shepard, Farrar & Wiser, 1201-234 R. A. Long Bldg., Kansas City, for residence on Sunset Hill; English type; brick and cut stone; brick chimneys, garage in basement. (Lately noted.)

Mo., Kansas City.—A. E. Webb will erect 1½-story frame dwelling at 117 N. Clinton St.; cost \$3000.

Mo., Kansas City.—King Realty Co. will erect 18 dwellings; brick and frame; cost \$50,000.

Mo., Kansas City.—Honora Scanlon will erect 2-story frame dwelling at 2636 Summit St.; cost \$5000.

Mo., Kansas City.—John M. Smithers will erect 2-story stucco dwelling at 5717 Central St.; cost \$4000.

Mo., Kansas City.—R. D. Simpson will erect 2-story stucco dwelling at 3631 Bellevue St.; cost \$6000.

N. C., Albemarle.—Wiscasset Mills Co. will erect residence for Mr. Denning, mill's superintendent.

N. C., Greensboro.—J. E. Latham opens bids about Oct. 15 to erect 5 to 7 dwellings; 5 to 7 rooms each; wood, brick, stone and cement block; wood and tile roofs; oak flooring; steam heating; city electric lighting; cost \$3500 each; J. W. Hughes, Archt., Greensboro. Address Owner.

Okla., Tulsa.—M. Kerr will erect residence at 17th and Cheyenne Aves.

Okla., Tulsa.—L. E. Roberts will erect \$800 residence at 1515 Carson Ave.

Okla., Tulsa.—N. T. Word of Texas Refinery will erect \$5000 residence at 11th and Cheyenne Aves.

Okla., Tulsa.—Frank W. Townsend has plans for \$5000 residence near 6th and N. Denver Sts.

Okla., Tulsa.—L. C. Wells will erect 2-story frame residence at 1217 Boston St.; cost \$3000.

Okla., Tulsa.—P. M. Buckley will erect 1-story frame residence on Carson Ave.; cost \$3000.

Okla., Tulsa.—Val Jean Biddison will erect \$3000 residence on Maple Ridge Ave.

S. C., Florence.—Louis J. Rollins, E. Evans & W. Elm Sts.

S. C., Spartanburg.—Dr. R. L. Branyon will erect residence.

Tenn., Nashville.—Albert J. Britt will erect residence.

Tenn., Nashville.—E. C. Scruggs will erect stone-veneer bungalow on Ashwood Ave.; cost \$3300.

Tenn., Nashville.—W. B. Baird is having plans prepared by Geo. D. Waller, Nashville, for brick bungalow in Love Circle; plans ready about Oct. 10.

Tex., Brenham.—T. F. Matchett has plans by M. M. Ginn, 607 Gay Hill St., Brenham, for residence; bids opened Sept. 29.

Tex., Dallas.—N. M. Harper will erect three 5-room and two 6-room frame cottages; cost \$3100.

Tex., Dallas.—W. A. Greer will erect two 5-room frame cottages at 702 S. Winnetka St. and 702 S. Clinton St.; cost \$3150.

Tex., Dallas.—T. P. Christian will erect 2-story 8-room frame cottage at 3723 Gilbert St.; cost \$3000.

Tex., El Paso.—W. W. Spittler will erect brick bungalow on Manhattan Heights; cost \$3000.

Tex., El Paso.—Anderson-Filler Investment Co. will erect 2 dwellings in 3800 block Clifton St.; cost \$5000.

Tex., El Paso.—Alamo Heights Co. will erect 2 bungalows on Grant Ave.; cost \$3500.

Tex., El Paso.—Jolly & Morris will erect brick residence in Sunset Heights; 30.9x40.5x30 ft.; cost \$6000.

Tex., Houston.—J. L. Jones will erect 7-room residence and barn; cost \$4000.

Tex., Houston.—E. L. Crain & Co. will erect 6-room residence and garage at Bernard & Connor Sts.; cost \$3700.

Tex., Houston.—D. A. Crawford will erect residence on Courtland Blvd.; 2 stories; frame; brick veneer; cost \$18,000; construction by owner.

Tex., Houston.—S. L. Gohlman of Gohlman, Lester & Co., is receiving bids through Flinger & Bailey, Architects, Houston, to erect residence at McGowan Ave. and San Jacinto St.; 12 rooms; 2 baths, sleeping and living porches; entire lower floor to have beam ceilings; intercommunicating telephones; stucco exterior; pergola and porte-cochere; clay tile shingle roof; hot-air heat.

Tex., San Antonio.—Matty Flaxman will erect 2-story dwelling on Evergreen St.; cost \$800.

Tex., San Antonio.—Chas. M. Cain will erect dwelling on Brahan Blvd.; 8 rooms and basement; hollow tile; Spanish metal roof; 1st floor oak, 2d, pine; hot-air heat; electric light; cement walk; cost \$8900; plans and construction by owner, 320 Brahan Blvd., Narcissa Pl. (Lately noted.)

Va., Fredericksburg.—R. A. Bode will erect residence on Charles St.

Va., Lynchburg.—H. A. Robinson will erect dwelling on Langhorne Rd.; Indiana limestone.

Va., Newport News.—J. R. Knight will erect bungalow; brick and shingle; H. W. Simpson, Archt., Norfolk.

Va., Newport News.—R. L. Knight opens bids Sept. 28 to erect dwelling; 53x21 ft.; frame; slate roof; pine floor; steam heat; cost about \$4500; H. W. Simpson, Archt., Newport News.

Va., Richmond.—L. J. Heindl will erect 2 semi-detached 2-story brick dwellings on Robinson St.; cost \$7630.

Va., Richmond.—Davis Land Co. will erect 6 two-story brick dwellings on Boulevard between Floyd and Grove Aves.; cost \$35,000.

Va., Richmond.—Jesse A. Ladd will erect detached 2-story brick dwelling on Hanover Ave.; cost \$5000.

Va., Richmond.—Davis & Archer, 2515 Hanover Ave., have plans by C. H. Archer, same address, for dwelling at 2114-16 Hanover Ave.; 25x65 ft.; brick; tin roof; oak floor; electric wiring; concrete walk; cost \$6000;

hot-water heat, \$500; construction by owners, who may be addressed.

W. Va., Charleston.—Dave Rollins will erect 2 cottages on South Side to replace burned structures.

W. Va., Moundsville.—Riggs Bros. will erect 2 tile residences on Washington Ave.

GOVERNMENT AND STATE

Fla., Pensacola.—Hangars.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., opens bids Oct. 16 for 3 hangars at U. S. Navy Aeronautic Station; plans and specifications at office of bureau as above and from commandant at site.

Fla., Tampa.—Quarantine Station.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect attendants' quarters, disinfecting shed, oilhouse and wharf at quarantine station at Tampa Bay; 1 story; total ground area 7600 sq. ft.; frame; E. Hart, Norfolk, Va., is lowest bidder at \$52,110. (Lately noted.)

Ga., Savannah.—Postoffice.—Marion Lucas, Custodian, opened bids to paint and repair postoffice; J. W. Tomlinson, Atlanta, is lowest bidder at \$3110. (Lately noted.)

Ky., Louisville.—Cottage.—Bureau of Fisheries, Dept. of Commerce, Washington, D. C., opened bids to erect cottage at Louisville Fisheries Station; Sanford Banghn, Jr., Louisville, is lowest bidder at \$2000. (Lately noted.)

Md., Baltimore.—Armory.—Armory Com., Harry C. Jones, Chrmn. Ch. Comm. Bldg., receives until Dec. 1 competitive designs for 4th Regiment Armory, Maryland National Guard, at North and Maryland Aves., through Maj. Albert S. Gill, Secy., 215 St. Paul St., Baltimore; site 280x303 ft.; cost not to exceed \$500,000; only one design by each competitor; will request appropriation from Legislature to erect structure. Address Major Gill. (Previously noted.)

Tex., Austin.—Capitol, Offices, etc.—State, Jas. E. Ferguson, Gov., selected Atlee B. Ayres, San Antonio, as State Archt. to prepare plans for State School for Blind (\$300,000 appropriation), land office building (\$300,000 appropriation), improvements to capitol (\$125,000 appropriation) and Confederate Women's Home (\$30,000 appropriation). (Previously noted in part.)

Tex., Kingsville.—Barracks.—Companies K and M, Twenty-sixth U. S. Infantry, will erect barracks.

Tex., New Braunfels.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., receives bids until Nov. 5 to erect, complete, including mechanical equipment, except lighting fixtures, U. S. postoffice; 1 story and basement; brick and stone faced; 4300 sq. ft. ground area; first floor fireproof; composition roof; drawings and specifications from custodian of site and Mr. Wetmore as above.

Va., Norfolk.—Barracks.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., opened bids to erect barracks at Navy-Yard; Singer-Pentz Co., 600 Equitable Bldg., Baltimore, is lowest bidder for wood piling at \$183,800, and Norcross Bros. Co., 406 Colorado Bldg., Washington, D. C., is lowest bidder for concrete piling at \$199,800; 3 stories and basement; steel and brick; 1-story-and-basement kitchen extension; main building to have 2 wings. (Lately noted.)

Va., Norfolk.—School Building.—Bureau of Yards and Docks, Navy, Dept., Washington, D. C., receives bids until Oct. 3 to erect school building at St. Helena Navy-Yard; 2 stories; brick; plans and specifications to be had of bureau or commandant of navy-yard named.

HOSPITALS, SANITARIUMS, ETC.

Ark., Little Rock.—Medical Department of University of Arkansas will erect hospital and clinic building. (See Schools.)

Fla., Miami.—City voted \$30,000 bonds for city hospital; B. H. Klyce, City Engr. (Hospital Com. lately noted to have selected plans by August Geiger, Miami, for hospital.)

Ga., Atlanta.—City repealed ordinance providing for election Sept. 30 on \$75,000 bonds for Grady Hospital. (See Schools.)

Miss., Gulfport.—King's Daughters' Hospital will probably begin erection of hospital in November.

N. C., Charlotte.—Tranquil Park Co., Dr. John Q. Myers, Prest., will erect sanitarium at Park and Sharrow Rds.; 20 rooms in administration building; 3 cottages; stone and brick; slate and shingle roof; wood and cement floor; steam heat; electric light;

freight elevator; vault lights; cost about \$35,000; architect not employed; ready for bids about Dec. 20. Address Dr. Myers. (Lately noted.)

Tenn., Bolivar.—Western Hospital for the Insane will rebuild laundry, engine-house, electric-light plant, ice plant and storehouse, previously noted damaged by fire.

HOTELS

Fla., Zellwood.—Zellwood Farms Co. will erect hotel; accommodations for about 60 people; electric-light plant; garage; dining-room finished in white enamel; construction begun.

N. C., Kernersville.—J. H. Dunlap, Bonlee, N. C., acquired 64-acre site at Kernersville; will develop Naomi Mineral Springs and establish resort; plans include erection of hotel.

N. C., North Wilkesboro.—J. J. Rogers is secretary of company contemplating erecting hotel at 9th and B Sts. to cost about \$40,000.

S. C., Rock Hill.—Rock Hill Lodge, A. F. & A. M., will erect hotel and lodge building. (See Association and Fraternal.)

Tex., El Paso.—Z. T. White is having plans prepared by Trust & Trust, El Paso, for addition to Paso Del Norte Hotel; 9 stories; 30x140 ft.; reinforced concrete; bids opened Jan. 1, 1916. (Previously noted to cost about \$150,000.)

W. Va., Bluefield.—L. Kaufman is reported to erect 3 additional stories to Commercial Hotel, providing 40 to 50 additional rooms.

MISCELLANEOUS

Ark., Little Rock.—Clubhouse.—Spring Lake Club, C. G. Price, Prest., has plans by Geo. R. Mann, Little Rock, for clubhouse 15 mi. from Little Rock on Arch St. pike; concrete and logs; lockers and shower baths in basement; electric lights; cost \$5000.

Fla., Stuart.—Market.—Johnson & Minschke will erect market; 1 story; 25x90 ft.; are receiving bids.

Ga., Atlanta.—Bathhouses.—Southeastern Fair Assn. will erect bathhouses; probably concrete construction. (See Miscellaneous Enterprises.)

La., New Orleans.—Hall.—Italian Hall Association receives bids until Oct. 14 to alter and enlarge building at 1920 Esplanade St.; separate bids for hot-water heating of main building; plans and specifications at office of Nolga & Torre, Architects, New Orleans.

Miss., Natchez.—Pavilion.—Company is being organized by D. H. Britton and others to develop Walker Springs; will erect dance pavilion, etc. (See Dwellings.)

Mo., St. Louis.—Clubhouse.—Riverview Club organized and will erect clubhouse on Riverview Drive; plans by Tom P. Barnett Co., St. Louis, call for Spanish Renaissance style; dining porch enclosed in glass; ballroom 50x100 ft.; tennis courts, etc.; T. T. Anderson, Chrmn. of Membership Comm.

Tex., Abilene.—Restroom.—E. B. Bynum, Prest. of Abilene Pressed Brick Co., and D. S. Castle propose to erect women's restroom at Fair Park; fireproof construction.

Tex., Bay City.—Library.—Bay City Library Assn. has plans for bungalow-style frame library building; association to furnish all materials; is receiving bids on labor.

Tex., Dallas.—Skating Rink.—Tom Finnegan will erect building for skating rink; 114x166 ft. floor space; maple floor; arranged for converting into natatorium, swimming tank to be constructed later; cost \$30,000; Vaughn Chaplin will be manager.

Tex., San Antonio.—Orphanage.—St. Joseph's Orphanage will expend \$4350 to alter building on W. Commerce St.

Va., Newport News.—Lunchroom.—Newport News Shipbuilding & Drydock Co. will erect lunchroom for employees to accommodate 1500; also erect administration building; 175 ft. long; 2 stories. (Noted in August as contemplating additional story to office building.)

RAILWAY STATIONS, SHEDS, ETC.

Va., Norfolk.—Norfolk & Western Ry., L. E. Johnson, Prest., Roanoke, Va., will expend \$1,700,000 to erect freight piers and sheds near Lambert's Point; southbound pier 1200x220 ft.; northbound pier 800x220 ft.; creosoted pile and timber; steel sheds; flat built-up roofs; slips between 2 structures; 4 tracks on each pier; construction will require dredging about 1,000,000 cu. yds. earth; plans and specifications by engineering department of railway; bids have not yet been asked; E. M. Graham, Terminal Supt., Norfolk.

SCHOOLS

Ala., Anniston.—City will vote in November on \$20,000 bonds to erect school. Address The Mayor.

Ark., Little Rock.—Medical Department of University of Arkansas, D. Morgan Smith, dean, will erect 3-story hospital and clinic building in rear of Medical College, 2d and Sherman Sts.; cost about \$20,000; Chas. L. Thompson, Archt., Little Rock.

Fla., Allenhurst.—(See Titusville.)

Fla., Indian River City.—(See Titusville.)

Fla., La Grange.—(See Titusville.)

Fla., Mims.—(See Titusville.)

Fla., Titusville.—Titusville School Dist. is having plans prepared by A. E. Lewis, Real Estate Bldg., Miami, Fla., for following reinforced concrete schools: Titusville, cost \$57,000; Mims, \$15,000; La Grange, \$5000; Turantia, \$2500; Indian River City, \$2500; Allenhurst, \$2500; plans ready about Nov. 1. Address Archt. (Lately noted voted \$100,000 school bonds.)

Fla., Turantia (not a P. O.).—(See Titusville.)

Ga., Atlanta.—City repealed ordinance providing for election Sept. 30 on \$3,358,000 bonds, to include \$1,000,000 for schools, \$375,000 for Grady Hospital and \$100,000 for cyclorama; will probably call bond election in spring. Address The Mayor. (See Sewer Construction.)

Ga., Cannon.—City voted bonds to erect school. Address The Mayor.

Ga., Hapeville.—Fulton County School Board, Atlanta, is having plans prepared by J. C. Battle and A. Barill, Jr., 522 Grant Bldg., Atlanta, for school; 2 stories and basement; brick veneer; slate roof; 6 classrooms; auditorium to seat 300; bids received in about 2 weeks; cost \$11,000; E. C. Merry, County Supt. of Education, Courthouse, Atlanta.

Ga., Jonesboro.—School Board, Dr. T. C. Cannon, Chrmn., is having plans prepared by Jas. J. Baldwin, Anderson, S. C., for school building; 9 rooms and auditorium; brick; composition roof; bids opened Oct. 20. (Previously noted to vote on bonds.)

Ga., Rome.—West Rome School Dist. will issue \$5000 bonds and erect school; A. N. Ford, J. T. Swinford, Thomas Gowan and others, Com.

Ga., Savannah.—Chatham county voted \$400,000 bonds for schools; Albert Wyly and others, Commrs. (Lately noted.)

Ky., Carlisle.—Board of Education is having plans prepared for \$15,000 annex to school.

Ky., Georgetown.—City votes in November on \$90,000 bonds to erect school. Address The Mayor.

Ky., Lexington.—City votes Nov. 2 on \$100,000 bonds for school. Address The Mayor.

Ky., Whitesburg.—Letcher county lets contracts Oct. 13 to erect 3 school buildings. Address G. Wash Jenkins, Whitesburg.

La., Zachary.—A. Flonacher, Secy. of Building Com. Zachary High School, receives bids until Oct. 7 to erect 2-story frame school; plans and specifications at office of C. M. Hughes, Supt., Baton Rouge, La.; J. W. Smith, Archt., Monroe, La., and store of Mr. Flonacher, Zachary.

Md., Baltimore.—Johns Hopkins University, W. Graham Boyce, Treas., 712 N. Howard St., opens bids Oct. 8 at office of Carrere & Hastings, Architects, 52 Vanderbilt Ave., New York, to erect chemical laboratory at Homewood; 3 stories; attic and basement; about 130x130 ft.; fireproof; brick; slate roof; concrete floor; heating, plumbing and lighting separate; arcade connecting with adjoining building; cost about \$150,000; bidders are Edw. Brady & Son, 1113 Cathedral St.; B. F. Bennett Building Co., 123 S. Howard St.; Henry Smith & Sons Co., German and Light Sts.; W. E. Burnham, Law Bldg.; Morrow Bros., 1201 Fidelity Bldg.; Chas. L. Stockhausen Co., 1 National Marine Bank Bldg.; Geo. Bunnecke & Sons, 305 St. Paul St.; W. E. Harn Co., 113 N. Calvert St.; Consolidated Engineering Co., 243 Calvert Bldg.; all of Baltimore; Norcross Bros. Co., 406 Colorado Bldg.; Geo. A. Fuller Co., Munsey Bldg.; both of Washington; Jacobs & Young, 116 W. 33d St.; John H. Parker Co., 315 4th Ave.; both of New York. (Previously noted.)

Miss., Senatobia.—Trustees of Tate County Agricultural High School, Ira G. Allen, Secy., receive bids until Oct. 14 to erect dormitory. (Lately noted.)

N. C., Asheville.—Craggy School Dist. will petition County Comms. for election on \$10,000 bonds to erect State high school. Address Dist. School Trustees.

N. C., Durham.—City is considering election on bonds to erect 2 schools, one on site of Morehead School, other in northwestern section of city. Address School Board.

N. C., Greenville.—Trustees let contract Sept. 29 to erect high-school building; 89x110 ft.; ordinary construction; Carey roof; wood floor; steam heat, plumbing and electric wiring separate; Henry E. Bonitz, architect, Wilmington, N. C. (Lately noted to open bids Sept. 21.)

Okl., Norman.—University of Oklahoma has plans by J. W. Hawk and J. O. Parr, Oklahoma City, Okla., for science hall and opens bids Oct. 27 for erection; 4 stories and basement; 60x120 ft.; white stone, probably Bedford limestone; accommodations for 600 students; auditorium with 200 seating capacity on first floor; laboratories, offices and recitation-rooms above; vault; compressed air and vacuum system; gas and electricity; cost about \$100,000; completion by Sept., 1916. (Noted in August.)

S. C., Columbia.—City will erect school on Blossom St. to replace burned structure; E. S. Dreher, Supt. of Schools.

S. C., Eastover.—Eastover School Dist. plans to erect school. Address Dist. School Trustees.

S. C., Florence.—School Board plans to erect \$30,000 school.

Tenn., Lonsdale, Station No. 7, Knoxville. City votes Oct. 30 on \$30,000 bonds for schools, etc.; H. E. Christenberry, Mayor.

Tenn., Nashville.—Board of Education receives bids in detail until Oct. 5 to erect schools as follows: Emma B. Clemmons School at Waverly Pl., Russell E. Hart, Archt., 900 Stahlman Bldg., Nashville; West Nashville School, Park Ave., Edw. E. Dougherty, Archt., 727 Stahlman Bldg., Nashville; plans and specifications at office of architects, office of Board of Education, High School Bldg., and Nashville Builders' Exchange, Noel Block, Nashville; has plans for Elliott School, to cost \$71,800, by Marr & Holman, Nashville; also for Pearl School, to cost \$65,200, by Chas. A. Ferguson, Nashville. (Previously noted.)

Tex., Austin.—State, Jas. E. Ferguson, Gov., selected Atlee B. Ayres, San Antonio, as State Archt. to prepare plans for lately-noted State School for Blind, etc. (See Government and State.)

Tex., Concho.—Dist. School Trustees opened bids to erect stone school building at cost of about \$4500; J. A. Kelley, Ballinger, Tex., is lowest bidder.

Tex., El Paso.—City opens bids Oct. 20 to complete high school; reinforced concrete, faced with pressed brick and terra-cotta; auditorium and balcony to seat 1500; fireproof construction throughout; hot-blast and steam heating system; concrete and Barrett specification roof; complete ventilating system throughout entire building with air washers; outdoor stadium 300x390 ft., with oval running track 1/4 mi. long; reinforced concrete seats; 17 tiers rising to height of 30 ft.; concrete structural portion, for which J. E. Morgan, El Paso, had contract, is completed; cost \$500,000; Trost & Trost, Archts., Mills Bldg., El Paso. (Lately noted.)

Tex., Marlin.—Attorney-General disappointed \$120,000 bond issue for school. (Previously noted.)

Tex., Nacogdoches.—School Board, F. H. Tucker, Pres., receives bids until Oct. 12 to erect high school and addition to ward school, including plumbing, heating and wiring; plans and specifications at office of C. H. Page & Bro., Archts., Austin, Tex. (Noted in August to have voted \$45,000 bonds to erect 3 schools.)

Tex., Orange.—City Commrs. will soon let contracts to erect high school and ward schools at approximate cost of \$150,000.

Tex., Palestine.—City opens bids Oct. 5 to erect high-school building in Reagan Park; 2 stories and basement; 122x125 ft.; fireproof; steam heat; cost about \$80,000; Sanguinet & Statts, Archts., Fort Worth, Tex. (Previously noted.)

Tex., Corsicana.—City votes Oct. 12 on \$125,000 bonds, to include \$25,000 to erect school; J. L. Halbert, Mayor. (Lately noted.)

Va., Hopewell.—Du Pont Powder Co. donated \$16,000 to erect school for Prince George county; 129x48 1/2 ft.; frame and stucco; metal shingle roof; plans by Mr. Burns, care company; construction immediately; land at Broadway and National Rd. donated by Real Estate Development & Construction Co., Petersburg, Va. Address Mr. Burns.

Va., Norfolk.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., receives bids

until Oct. 3 to erect school building. (See Government and State.)

W. Va., Man.—Board of Education of Triadelphia Dist., Logan county, receives bids through Dr. J. W. Thornbury, Man, until Oct. 4 to erect 8-room stone and brick school; plans and specifications at office of Emmons-Hawkins Hardware Co., Huntington, W. Va.; Dr. J. W. Thornbury, Man; Lon Browning, County Supt., Logan, W. Va.; Beddow, McCorkle & Wilson, Archts., Logan.

STORES

Ala., Oneonta.—Frank Holcombe will erect store and office building; 2 stories; brick.

D. C., Washington.—Carroll Electric Co. has plans by J. J. Moels, 127 Colorado Bldg., Washington, for store, storage and office building at 714 20th St. N. W.; 3 stories; 40x155 ft.; tapestry brick; limestone and bronze trim.

Fla., Arcadia.—A. B. Williford will erect brick business building at DeSoto Ave. and Oak St.; cost about \$20,000.

Fla., Clearwater.—W. T. Harrison has plans by Lester Avery, Clearwater, for store building on Cleveland St.; 1 story; 130x90 ft.; brick; Barrett specification roof; cement and wood floor; electric light; cost about \$15,000; contract signed soon. (Lately noted.)

Fla., Eustis.—Miss Edna Whitney will erect 2-story concrete business building.

Fla., Eustis.—James Simpson will erect concrete block business building.

Ga., Atlanta.—Hugh Richardson will erect theater and store building. (See Theaters.)

Ga., Atlanta.—McEachern & Wardlaw will erect 2-story concrete building at Simpson and Ashby Sts.; cost \$6000; day labor.

Ga., Carrollton.—Sid Holderness and B. F. Bearce will erect brick store building.

Ga., Carrollton.—D. L. Hearn will erect brick business building.

Ga., Savannah.—Lewis Greenberg purchased store and dwelling at Randolph St. and Oglethorpe Ave.; will remodel store.

Ky., Louisville.—Speed Company contemplates erecting stores on Guthrie St. (See Warehouses.)

Ky., Winchester.—Geo. Kennedy will erect brick store building to replace burned structure.

Mo., Kansas City.—Crescent Realty Co. will erect 2-story brick business and apartment building at 3501 E. 9th St.; cost \$7000.

Mo., Kansas City.—W. H. Reed will erect 2-story brick business and apartment building at 1900 Flora St.; cost \$12,000.

Mo., St. Louis.—Veronica Realty Co. will erect 2-story store and tenement-house at 8426-28 Hall's Ferry Rd.; cost \$4600; construction by owner.

Mo., Steele.—Coleman & Gibson, H. P. Coleman, J. W. Yarbrough, J. S. Gosson and H. E. Doener will erect brick buildings on Main St. to replace buildings lately burned.

Mo., Steele.—J. W. Johnson will erect store on Lot 2, Main St.; 35x90 ft.; 2 stories; paper or galvanized-iron roof; concrete or hardwood floor; also, store on Lots 4 and 5, Main St.; 2 stories; 52x80 ft.; brick; hardwood floor. Address Archt. (Lately noted burned.)

N. C., Asheville.—Mrs. Mary E. Weaver (Jacob F. and J. H. Weaver, Agts.) will erect store building; 2 stories and basement; 25x120 ft.; brick; plate-glass front; cost \$3000; completion in 60 days.

N. C., Asheville.—D. B. McCrary, owner of Shube Drug Co., and J. H. McCain, owner of Reid Honnah Grocery Store, are reported to erect 2 or 3-story business building on Main St.

N. C., Chapel Hill.—Mayor Roberson let contract to erect store building; 50x100 ft.; 2 storerooms.

N. C., Charlotte.—E. D. Latta will erect 2-story arcade building on S. Tryon St.; site 44x138 ft.

Okl., Miami.—W. E. Halsell, Kansas City, will erect business building; 72x120 ft.; to be occupied by A. Hood & Sons Implement Co.; also contemplates erecting moving-picture theater.

S. C., Camden.—Henry Savage will erect building for stores, etc. (See Bank and Office.)

Tenn., Lenoir City.—J. M. Lackey is reported to erect brick business building.

Tenn., Lenoir City.—W. N. Lacy will erect 2-story brick mercantile building; cost about \$3000.

Tenn., Savannah.—John W. De Berry will erect brick business building.

Tex., Dallas.—M. L. and J. Genaro will erect 1-story brick building at 302 Houston St.; cost \$7500.

Tex., Pearsall.—A. F. and A. M. have plans for store, office and lodge building. (See Association and Fraternal.)

Tex., San Antonio.—Mrs. F. Flores will erect \$7500 store building on Main Plaza.

Tex., Temple.—W. G. Guthrie will remodel business building; cost about \$4000.

Tex., Temple.—J. Rudds will erect store.

Tex., Temple.—J. B. Conlisk will erect store.

Va., Norfolk.—T. T. Spratley is having plans prepared for store and theater building. (See Theaters.)

Va., Staunton.—J. Lester Hoy will erect store building on Middlebrook Ave.; 2 stories; brick.

Va., Suffolk.—Geo. W. Nurney will erect business building on E. Washington St.

W. Va., Bridgeport.—C. W. Adolph will erect business building on Cadiz Pike.

W. Va., Bluefield.—E. S. Pedigo Co. is reported to have plans by Pedigo & Garry, Bluefield, for business building at Federal and Scott Sts.; 4 or 5 stories; brick.

THEATERS

Ala., Birmingham.—Hollis M. Newsome has plans by Wm. Leslie Welton, Birmingham, for theater.

Fla., New Smyrna.—J. J. Hall, Fort Lauderdale, Fla., is promoting erection of opera-house to seat about 700 people.

Ga., Atlanta.—Hugh Richardson has plans by A. Ten Eyck Brown, Forsyth Bldg., Atlanta, for motion-picture theater and store building at Forsyth and Luckie Sts.; 2 stories with provision for 5; 80x100 ft.; mill construction; brick with terra-cotta trimmings; composition roof; wood floor; electric light; about 400 sq. ft. of vault lights; theater proper 100x55 ft., with seating capacity of 1200 people; fan ventilation; cost \$20,000 to \$25,000; bids opened Oct. 15; will be leased to Peter Milon.

Ky., Louisville.—Suburban Lodge, A. F. & A. M., will erect brick moving-picture theater at 3d St. and Central Ave.; cost \$10,000; Harry Barber, Chrmn. of Com.

Mo., Columbia.—T. B. Hall will erect theater at 9th and Cherry Sts.; cost about \$40,000.

N. C., Chapel Hill.—S. J. Brockwell will erect moving-picture theater; 2 stories; 50x130 ft.; main auditorium to seat 600; upper floor for students' rooms.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Mrs. Stanley McCormick let contract to Wm. P. Lipscomb & Co., 1405 F St. N. W., Washington, to erect apartment-house at 18th St. and Mars Ave.; 3 stories and basement; 99x110 ft.; steel and stone construction; tile and asbestos roof on steel beams; vapor heat; electric light; freight and passenger elevators; cost \$353,000; J. H. de Sibour, Archt., Hibbs Bldg., Washington; contract for 750 tons steel to Barber & Ross, Washington. (Lately noted.)

Ga., Atlanta.—Geo. E. Argard let contract to R. M. Walker, Atlanta, to erect apartment-house at Highland and Colquitt Aves.; cost about \$25,000; A. N. Canton, Archt., Atlanta.

Ky., Lexington.—B. E. Allen let contract to erect flat and store building. (See Stores.)

Mo., St. Louis.—Guarford Realty & Investment Co. let contract to R. A. & G. Bullock, St. Louis, to erect 5 two-story tenements at 6000 to 6020 Etzel St.; each site 42x150 ft.; porches front and rear; cost \$27,500.

Mo., St. Louis.—John Henneke let contract to H. J. Kelly, St. Louis, to erect block of flats at 4528-50 Lexington Ave.; 3 to have 4 suites and 1 to have 2 suites; tile baths; furnaces; sun porches; structures financed by and under supervision of Geo. J. Wansstrath.

Mo., St. Louis.—John S. Horan let contract to Wm. H. Leahy, St. Louis, to erect 2-story tenement-house at 2420 Bacon St.; cost \$3500.

N. C., Chapel Hill.—Bruce Strowd and others let contract for theater with upper floor equipped for students' rooms. (See Theaters.)

Va., Berkley, Station Norfolk.—John B. Foster let contract to Geo. T. Wrenn to convert residence at 210 Chestnut St. into apartments.

Va., Lynchburg.—C. S. Reams let contract to R. L. Daniel to erect apartment-house on

Okl., Miami.—W. E. Halsell contemplates erecting moving-picture theater. (See Stores.)

Tex., Cleburne.—J. T. Green and others are having plans prepared for fireproof theater.

Va., Norfolk.—T. T. Spratley is having plans prepared by W. H. Saunders, Norfolk, for theater on Granby St. between Freemason and Charlotte Sts.; front finished in green and white enamel brick; seating capacity 600; ventilation system; 2 stories on either side of front.

W. Va., Alderson.—A. S. Russell will erect building for theater, offices and Masonic Temple; 3 stories; brick.

W. Va., Huntington.—Princess Theater Co. will erect theater on 4th Ave.; fireproof; 45x200 ft.; seating capacity 1500; terra-cotta front; marquee in center; syphon ventilators in roof and washed-air system for auditorium; reception lobby 50 ft. deep; cost \$25,000; Ford Dickey, Archt., Huntington.

WAREHOUSES

D. C., Giesboro Point, P. O. at Washington.—Washington Steel & Ordnance Co. P. O. Box 1812, Giesboro Point, will erect 1-story steel building; cost \$5000; construction by owner.

Ky., Louisville.—Speed Company is reported to erect 6-story warehouse for Stewart Dry Goods Co.; 60x75 ft.; cost about \$4,000; also contemplates erecting stores on Guthrie St.

Mo., St. Louis.—Monsanto Chemical Co. will erect 1-story warehouse at 180-10 Lafayette Ave.; cost \$7000; construction by owner.

Tenn., Carthage.—Upper Cumberland Loose Leaf Tobacco Warehouse Co. will erect rehandling house in connection with warehouse on Spring St.; 2 stories and basement; 80x120 ft.; frame; composition roof; cost about \$3000; hand elevator and power press. Address Lee Duke, Carthage, Tenn.; lately noted. (See Machinery Wanted—Elevator; Press, Power.)

Tenn., Memphis.—Harris Iron & Supply Co., Jefferson Ave., will erect warehouse on S. Front St.; 108x200 ft.; standard mill construction; 20-ft. ceiling; G. M. Shaw & Co., Archts., Memphis.

Tex., El Paso.—Landers Lumber Co. will erect warehouse and office building. (See Bank and Office.)

Va., Norfolk.—A. B. Rosenkrans plans to erect 1-story brick warehouse on Scott St. to be occupied by Gyro Metal Works Co.; estimated cost \$15,000.

Rivermont Ave.; 42x134 ft.; brick; slate roof; hardwood floor; low-pressure steam heat; electric light; cost \$21,000; Wm. P. Care, Archt. Address owner.

Va., Norfolk.—F. M. Kilam let contract to S. D. Brown, Norfolk, to erect 3-story brick apartment-house at Armistead Bridge Rd. and Colley Ave.; 24 suites; 133x103 ft.; cost \$30,000.

ASSOCIATION AND FRATERNAL

Md., Manchester.—Daniel and Jacob Lodge No. 23, I. O. O. F., let contract to Geo. Rupp, Lineboro, Md., to erect building lately noted; 2 stories and basement; 25x32 ft.; concrete basement; brick above; tin roof; maple floor; acetylene-gas lighting from street main; steam heat; cost, without equipment, \$1500; J. Daniel Dienst, Archt., Manchester. Address E. W. Gregory, Manchester. (See Machinery Wanted—Lighting Fixtures; Theater Equipment.)

BANK AND OFFICE

D. C., Washington.—Jas. L. Marshall, 70 10th St. N. W., Washington, contractor in charge of erecting office building for Federal City Construction Co., for occupancy of Southern Ry. Co., let contract for heating and plumbing to Riggs, Distler & Strigert, 23 Light St., Baltimore, at about \$30,000; plans by Milburn, Heister & Co., Union Savings Bank Bldg., Washington, call for building on Pennsylvania Ave.; 120x196 ft.; fireproof; cost about \$750,000. (Previously noted.)

Okl., Tulsa.—S. Gallais let contract for steel construction work on 10-story building at 4th and Boston Sts. to Christopher & Simpson, St. Louis; plans by A. W. Black & Son, 522 Security Bldg., St. Louis, call for structure 50x140 ft.; tar and gravel roof; tile floors; total cost approximately \$250,000. (Previously noted.)

CHURCHES

Miss., Gulfport.—Norwegian Seamen's Mission will erect building for chapel, reading-room and assistant's residence; 70x50 ft.; 1 story; frame; fireproof; wooden floors; electric wiring; no heating plant; cost about \$2000; foundation laid; plans and construction by Rev. Andreas Kleveland, P. O. Box 37, Mobile, Ala. (Lately noted.)

Mo., Kansas City.—Methodist Episcopal church let contract to C. E. Denny, 2808 Poplar Ave., Kansas City, to erect building at 5th St. and Spruce Ave.; 52x61 ft.; stone foundation; brick walls; cost \$7000; hot-air heat, \$350; light, \$100; C. A. Barrett, Archt., 608 E. 25th St., Kansas City. (Noted in August.)

CITY AND COUNTY

Ala., Fayette—Jail.—County let contract to Dobson & Oliver to erect jail; cost \$18,000; E. J. Ostling & Son, Archts., Tuscaloosa, Ala. (Previously noted.)

Ky., Bardwell.—Carlisle county let contract to K. B. Wickersham, Mayfield, Ky., at \$720 to erect jail, and to Van Dorn Iron Works Co., Cleveland, O., at \$325 for cell work; Mr. Hazlewood, Archt., Bardwell. (Lately noted.)

Miss., Clarksdale—Jail.—County Commrs. let contract to erect addition to courthouse and jail. (See Courthouses.)

Tex., Houston—Sheds.—City let contract to construct firewalls at municipal cotton sheds. (See Warehouses.)

Tex., San Marcos—City Hall and Fire Station.—City let contract to Goodner, Gausdin & Kennedy, San Marcos, to erect building for city hall and fire station; 56x70 ft.; fireproof; Spanish clay tile roof; reinforced concrete floor; cost \$20,000; Roy L. Thomas, Archt., Scarbrough Bldg., Austin. (Lately noted.)

W. Va., Beckley—Jail.—D. J. Phipps, Box 533, Beckley, general contractor to erect jail and sheriff's residence, let following sub-contracts: Brick work, E. C. Ford, Norfolk, Va.; reinforcing, Norfolk office Trussed Concrete Steel Co., Youngstown, O.; carpenter work, J. W. Robinson, Athens, W. Va.; mill-work, Virginia Supply Co., Princeton, W. Va.; steel and iron work, Camden Iron Works; sheet-metal work and roof, Roanoke Sheet Metal Works; both of Roanoke, Va.; excavation and concrete by day labor; plans by B. F. Smith, Washington, D. C., call for fireproof structure 42x80 ft.; slate roof; reinforced-concrete floors; steam heat; electric lighting; cost \$40,000. (Lately noted.)

COURTHOUSES

Miss., Clarksdale.—County Commrs. let contract to Roy Neil, Friar Point, Miss., to erect addition to courthouse and jail; cost about \$3000. (Lately noted.)

DWELLINGS

Ala., Birmingham.—Birmingham Realty Co. let contract to W. S. Cooper, Birmingham, to erect 2-story frame residence; cost \$4000.

Ark., Magness.—W. J. Waldrup let contract to W. W. Magness, Newark, to erect 2-story dwelling on farm near Newark.

D. C., Washington.—Chas. H. Mixer let contract to Jessie L. Bunch, 922 D St. S. W., Washington, to erect dwelling at 2609 36th Pl.; 2 stories; frame; plans by contractor.

D. C., Washington.—G. L. Garriott let contract to A. B. Campbell, 1410 H St. N. W., Washington, to erect dwelling at 2947 Momb St.; 2 stories; frame; cost \$4250; Geo. T. Santmyers, Archt., 216 Kenos Bldg., Washington.

Fla., Bradentown.—F. H. Oliphant let contract to T. W. Hullinger & Son, Bradentown, to erect bungalow in Braden River section.

Fla., Orlando.—E. D. Wherry let contract to J. C. Manuel, Orlando, to erect residence; 7 rooms; sleeping porches.

Fla., Sarasota.—Mr. Vanderloot let contract to Geo. L. Lysat, Sarasota, to erect residence.

Fla., St. Petersburg.—W. H. Hall, Shelbyville, Ky., let contract to erect residence on 7th Ave. North.

Fla., West Palm Beach.—H. C. Bartholomew is reported to have contract to erect residence in Royal Park for client; will also erect residence for himself in Pinewood Terrace.

Ga., Atlanta.—A. J. and H. F. West let contract to erect two 6-room residences at 512-14 Chestnut St.; sites 50x150 ft. each; cost about \$5000.

Ga., Atlanta.—Robt. F. Maddox let contract to Gude & Co., Atlanta, to erect dwelling at Ellis and Peachtree Sts.; 2 and 3 stories; 55x187 ft.; mill construction; electric light; vault lights; cost \$35,000; A. Ten Eyck Brown, Archt., 607 Forsythe Bldg., Atlanta. (Previously noted.)

Ga., Dalton.—D. C. McCutchen let contract to Hamilton & Williams, Dalton, to erect residence; 10 rooms and 2 halls; stucco on frame; parapet wall; flat roof (probably Carey or similar); 4-ft. cornice covered with Spanish tile; 2 porches; hardwood floors in 3 rooms, pine in remainder; hot-water or hot-air heat; gas and electric lighting; tile mantels; J. D. Alsop, Archt., Chattanooga, Tenn.; foundation completed. Address Owner. (Lately noted.)

Ga., Jonesboro.—Mrs. W. B. Stewart let contract to J. C. Adamson, Jonesboro, to erect residence.

Ga., Marietta.—Mrs. Ralph Norcutt let contract to Black Lumber Co., Marietta, to erect residence; 2 stories; frame; furnace heat; hardwood floors; tiled bathrooms; cost \$500; Wagener & Cooksey, Archts., 1208 Fourth National Bank Bldg., Atlanta. (Lately noted.)

Md., Baltimore.—Mrs. Josephine Langrall let contract to Raymond E. Chambers, 36th St. and Roland Ave., Baltimore, to erect dwelling on Carlisle Ave. near Garrison Ave.

Md., Baltimore.—J. B. Sweeney let contract to J. M. Perego & Son, Mt. Washington, Md., to erect dwelling on North Ave., Hill Top Park; 2½ stories; 27x32 ft.; frame; slate roof; steam heat; electric light; cost \$4000; W. C. Bailey, Archt., 729 Title Bldg., Baltimore.

Md., Towson.—W. Gill Smith, Towson, let contract to Wm. H. Harrison, Towson, to erect 2 dwellings on Joppa Rd. near Fairmount Ave.; 2 stories; 32x28 ft.; frame; slate roof; hot-water or steam heat; electric light; cost \$6000; plans by owner.

Miss., Olo.—Finkbine Lumber Co. let contract to C. O. Eure, Hattiesburg, Miss., to erect 6 residences and 40 tenant-houses; cost \$20,000; completion in 60 days.

Mo., St. Louis.—W. P. Blake let contract to Barron-Crawford Co., St. Louis, to erect 2-story dwelling at 1035 Thornby St.; cost \$12,000.

Mo., St. Louis.—G. P. Rupp let contract to F. J. Rupp Building & Construction Co., St. Louis, to erect 2-story dwelling at 5782 Waterman St.; cost \$4600.

Mo., St. Louis.—Julia Murphy let contract to Wm. Scates, St. Louis, to erect 3 one-story dwelling at 2917-19-23 Macklind St.; cost \$7500.

N. C., Charlotte.—H. J. Dunavant let contract to R. L. Goode, Charlotte, to erect residence in Myers Park; 2 stories; 8 rooms; brick veneer; slate roof; hardwood floors; hot-air heat; cost about \$10,000; Hunter & Gordon, Archts., 701 Realty Bldg., Charlotte. (Previously noted.)

S. C., Hartsville.—Wm. Egleston let contract to Haynesworth & Lawton, Florence, S. C., to erect dwelling on Home Ave.; 2 stories; 48x62 ft.; brick-veneer; slate roof; pine and hardwood floor; probably electric light; cost \$10,000; Wilson & Sompayrac, Archts., Columbia, S. C.

N. C., Kinston.—Dr. F. Pitts will erect 7-room residence on N. Queen St.; frame; tin roof; cost about \$3500; W. J. Reid, Contr., Kinston. Address owner.

N. C., Winston-Salem.—Geo. W. Coan, Jr., let contract to J. H. Grubbs, Winston-Salem, to erect 8-room residence; cost \$3000.

S. C., Spartanburg.—Rev. W. C. Owens let contract to J. M. Crawford, Spartanburg, to erect residence on Hampton Ave.; 8 rooms; cost \$3250.

Tenn., Nashville.—J. J. Bevington let contract to H. P. Jacobs, Nashville, to erect addition to residence at 825 19th Ave. South.

Tenn., Nashville.—J. D. Torrey let contract to J. Z. Chilton, Nashville, to erect residence at 3310 Central Ave.

Tenn., Wartrace.—J. L. Walker let contracts as follows to erect residence: Painting, Collins & Neal; tile work, H. E. Farmer, Nashville, Tenn.; plumbing, J. M. Gallagher, Nashville; carpenter work, G. W. McClanahan.

Tex., El Paso.—J. F. Mullins has contract to erect 5-room bungalow on Grant Ave.; cost \$3500.

Tex., El Paso.—Geo. W. Sharp has contract to erect 2 bungalows in Manhattan Heights; cost \$5000.

Va., Petersburg.—Robt. W. Price let contract to E. L. Baas, Petersburg, to erect dwelling on Walnut Hill; brick veneer;

slate roof; cost \$6000; S. Daily Craig, Archt., 22-23 Leigh Bldg., Petersburg; construction begun. (Lately noted.)

Va., Phoebus.—S. C. Rees let contract to Alexander Weston, Hampton, Va., to erect dwelling; 32x30 ft.; frame; slate roof; electric light; cost \$2300; steam heat, \$500; C. T. Holtzclaw, Archt., Hampton. (Lately noted.)

W. Va., Spencer.—T. E. Vineyard let contract to J. B. Martin, 1906 St. Clair Ave., E. Liverpool, O., to erect dwelling; 35x40 ft.; brick and hollow tile; tile roof; hardwood floor; electric and gas light; cost \$8500; plans by contractor. (Previously noted.)

GOVERNMENT AND STATE

D. C., Washington.—Laboratory.—Wells Bros. Co., Riggs Bldg., Washington, general contractor to erect laboratory building for Bureau of Standards, let contract for 130 tons steel to Barber & Ross, Washington. (Lately noted.)

Fla., Eustis—Postoffice.—W. S. McClelland let contract to Goodfellow & Scott, Eustis, to erect postoffice and office building on Bay St. lately noted; 2 stories; 77x27 ft.; light buff recess-joint press brick; gravel roof; wood and tile floor; hot-water heat; electric light; street lamps; cost \$10,000; plans by contractors. Address owner. (See Machinery Wanted—Postoffice Equipment.)

Mo., Fulton.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$46,337 to Balkin Construction Co., 53 W. Jackson Blvd., Chicago, to erect postoffice; 1 story and basement; brick; terra-cotta and stone; 3650 sq. ft. ground area; partly fireproof; composition and tile roof. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

Md., Baltimore.—Hebrew Hospital let contract to Consolidated Engineering Co., 243 Calvert Bldg., Baltimore, to erect Hens Memorial Dispensary building on hospital grounds at Madison St. and Rutland Ave.; 2 stories; 90x44 ft.; fireproof; brick exterior; terra-cotta tile partitions; slag roof; concrete floor; cement walk; underground passageway; cost about \$40,000; vacuum heat and gas and electric light separate; Jos. Evans Sperry, Archt., 409 Calvert Bldg., Baltimore. (Lately noted.)

HOTELS

Fla., Boca Grande.—E. T. Roux & Son, Plant City, Fla., have contract for all materials for construction of additions to Gasparilla Inn for Charlotte Harbor and Northern R. R. and for which G. A. Miller, Tampa, Fla., has general contract; 42x100 and 42x50 ft.; 3 stories; frame; mill construction; composition roof; wood floors; private heating and lighting; cost \$60,000; F. J. Kenard, Archt., Tampa. (Lately noted.)

Fla., Miami.—C. W. Gardner is reported to have let contract to erect 2 stores adjoining Royalton Hotel, etc. (See Stores.)

Fla., Safety Harbor.—D. M. Pipkin, Lakeland, Fla., let contract Mutual Contracting Co., St. Petersburg, Fla., to erect hotel; 90x40 ft.; brick; Carey roof; pine floor; Lester Avery, Archt., Clearwater, Fla. (Lately noted.)

Ga., Atlanta.—Wincoff Operating Co. let contract to Realty Construction Co., Atlanta, to alter and repair Wincoff Hotel at cost of \$20,225; will install 2 high-pressure boilers.

Tenn., Halls.—W. H. Hanna, Propr. of Hanna Hotel, let contract to remodel hotel.

MISCELLANEOUS

Ala., Birmingham.—Restaurant.—M. C. Banks has contract to remodel building for restaurant for John R. Thompson Co. of Chicago; will provide tile and glass front; cost about \$30,000.

Ga., Thomasville.—Stables.—H. J. Schleisinger, Milwaukee, Wis., let contract to Mr. Teichman, Thomasville, to erect stables.

S. C., Florence.—Fair.—Pee Dee Fair Assn. let contract at \$3500 to C. L. Johnston, Florence, to erect main building 150x100 ft.; annex on each side, 50x50 ft. each; frame; clay floors at present, later to be covered with concrete.

W. Va., Wheeling.—Clubhouse.—Fort Henry Club will erect 1-story addition to building at 14th and Chapline St.; R. R. Kitchen Co., Contr., Wheeling; cost \$10,000.

SCHOOLS

Fla., Clearwater.—Pinellas County School Board let contract at \$11,900 to Florida Engineering & Construction Co., Jacksonville,

to erect school building at Fort Harrison Ave. and Nicholson St.; 2 stories; 64x77 ft.; brick; Spanish tile roof; Lester Avery, Archt., Clearwater, Fla. (Lately noted.)

Fla., Safety Harbor.—Pinellas County Board of Public Instruction, Clearwater, let contract at \$10,500 to Wolf & Glass, Safety Harbor, to erect school; 2 stories; brick; asbestos shingle roof; Lester Avery, Archt., Clearwater. (Lately noted.)

Fla., Safety Harbor.—Pinellas County School Board let contract to C. O. Glass, Safety Harbor, to erect school building; 3 stories; 58x75 ft.; brick; galvanized-iron shingle roof; cost \$10,500; Lester Avery, Archt., Clearwater, Fla. (Lately noted.)

Ky., Kettle Island.—Pioneer Coal Co. and employees will erect for Bell county school building; 57x57 ft.; white pressed brick; asbestos shingle roof; rift pine; cost \$4000; heating, \$800; lighting, \$50; R. J. Ebner, Box 134, Pineville, Ky.; construction by Pioneer Coal Co.

N. C., Durham.—Board of Education let contract to W. E. Lynn, Durham, to erect school in Patrick Henry Dist.; 4 rooms and assembly hall; cost about \$3500. (Lately noted.)

S. C., Sumter.—Board of Education let contract to J. M. Harby, Sumter, to erect girls' high-school building and auditorium on W. Liberty St.; 105x39 ft.; 2 stories and basement; hollow tile walls veneered with brick; Barrett's specification and tin roof; cement floor in basement; double wood above; cost \$21,550; fan system hot-air heat, \$3068; electric light, \$700; N. G. Walker, Rock Hill, and J. H. Johnson, Sumter, architects. Address contractor. (Lately noted.)

Tenn., Knoxville.—County Grammar and High School Boards let contract at \$4430 to W. F. Peckinpaugh, Knoxville, to erect 3 principals' residences for Carter's Young and Karn's High schools.

Tenn., Nashville.—Board of Education let following contracts in connection with erection of additions and improvements to schools: Glenn School—Foundation and masonry, M. A. Lightman & Co., \$321; cut stone, Joseph H. Peter & Co., \$330; concrete, J. E. LeSueur, \$439; tin, galvanized iron and slate work, H. E. Farmer, \$523; painting and glazing, John H. Gray, \$447; electric wiring, Standard Electric & Machinery Co., \$167; plastering, H. Hardison & Co., \$537.40; brick work, Nashville Brick & Tile Co., \$4897; contracts for steam heating, plumbing and carpenter work not yet awarded; bids on carpenter work were declared off and new bids now being solicited; Edw. Dougherty, architect, 727 Stahlman Bldg., Nashville; Lockland School—Painting and glazing, John H. Gray, \$245; tin and galvanized iron work, E. T. Murray & Co., \$359; carpenter work, J. Z. Chilton, \$1789; concrete work, Uncle Hiram Roofing Co., \$246.55; brick work, Capital City Construction Co., \$1469; plastering, Cooper & Ferguson, \$163; heating, H. E. Farmer, \$235; electric wiring, Standard Electric & Machinery Co., \$127; cut stone, Joseph H. Peter & Co., \$89; foundation, M. A. Lightman & Co., \$743; B. G. Hodge, Archt., Nashville; all contractors of Nashville. (Previously noted.)

Tex., Baxter, R. D. from Athens.—Trustees let contract to Gilmore & Pylon, Athens, to erect school; brick, hollow tile and cement; 4 rooms, halls, corridors, etc.; T. K. Harris, Archt., Baxter.

Tex., Palestine.—Trustees let contract to Mr. Gault to erect Second Ward School. (Previously noted.)

Tex., Paris.—City let contract to erect addition to high school; cost \$26,800; foundation, plumbing, wiring and painting not included in general contract.

Tex., Rio Grande.—City is reported to have let contract to erect \$9000 school; construction begins Oct. 1; completion by Jan. 1. (Previously noted.)

W. Va., Bluefield.—Board of Education let contract to John F. Barber & Sons to erect school building on Rockbridge St.; 146x100 ft.; ordinary construction; Barrett roof; maple floor; steam heat; electric light; cost \$45,000; Pedigo & Gary, Archts., Bluefield. Address contractor. (Lately noted contractor low bidder.)

W. Va., Wheeling.—St. Joseph's Convent will erect 1-story addition at 14th and Eoff Sts.; cost \$7000; John L. Glesley Co., Contr., Wheeling.

STORES

D. C., Washington.—Sunshine Dry Cleaning Co. let contract to Andrew Murray, 729 12th St. N. W., Washington, to remodel store at 3217-19 Mt. Pleasant St. N. W.; 1 story; brick; cost \$5000; A. S. Atkinson, Archt.

Fla., Miami.—C. W. Gardner is reported to have let contract to W. F. Yarbrough, Miami, to improve Royalton Hotel; will raise present structure, construct 2 stores adjoining, provide roof garden, etc.

Ky., Jackson.—John M. Snowden let contract to Frank Majority, Jackson, to erect cut-stone business building in South Jackson.

Ky., Lexington.—B. E. Allen let contract to J. N. Merchant to erect store and flat building at 251-5 N. Limestone St.; 45x79 ft.; brick; gravel roof; electric light; Fred. Manley, Archt., 600 City National Bank Bldg., Lexington. (Lately noted.)

Mo., St. Louis.—Lackland estate let contract to J. N. Bright Building & Contracting Co., St. Louis, to repair mercantile building at 215 Pine St.; cost \$6900.

Tenn., Nashville.—W. E. Parrish & Co., Nashville, have contract to remodel front of stone in Hitchcock Bldg. at Church St. and 6th Ave.

Tex., Colorado.—Mrs. Kate Moeser let contract to erect business building; 1 story; brick; 36x75 ft.

Tex., Temple.—J. A. Campbell, Cleburne, Tex., let contract to remodel 2-story brick business building on Main St.; will install gray pressed brick front, etc.

THEATERS

Ky., Mayfield.—Gardner & Usher let contract to X. B. Wickersham, Mayfield, to erect motion-picture theater on Broadway; 2½ stories; 42x142 ft.; brick, concrete and wood; tin roof; mosaic, tile and wood floor; hot-air heat; electric light; cost \$15,000; Ellis X. Wickersham, Archt., Mayfield.

N. C., Chapel Hill.—Bruce Stroud, Mayor Roberson and others let contract to Orange Lumber Co., Chapel Hill, to erect moving-picture theater; 2 stories; brick; 50x100 ft.;

main auditorium to seat 480; completion in 60 days; upper floor for students' rooms.

Tenn., Nashville.—Sixth Avenue Property Co. will erect theater on 6th Ave. to be leased to Empress Amusement Co., W. H. Wassman, Pres.; following contracts have been let: Heating and ventilating, John Bourchard & Sons Co.; plumbing, N. S. Jonte; electric wiring, Braid Electric Co., all of Nashville; electrical fixtures, Decorators' Supply Co., Chicago; plans by Marr & Holman, Nashville, call for structure 50x150 ft.; fireproof; gravel roof; concrete floor; indirect hot-air washer ventilating system to cost about \$10,000; contract also let for foundation and excavation. (Noted in August.)

WAREHOUSES

Ala., Birmingham.—Continental Gin Co. let contract to L. V. Lebarre, Birmingham, to erect mill-construction warehouse; Miller & Martin, Archts., Birmingham.

Ark., Helena.—Interstate Grocery Co. let contract to Doyle & Co., Cotton Plant, Ark., to erect warehouse at Phillips and Walnut Sts.; fireproof; concrete and steel; 1 story; concrete awning along one side; cost \$55,000.

S. C., Tizah.—Catawba Lumber Co. has contract to erect Farmers' State Warehouse; T. M. Oates, Wm. Campbell and James Campbell, Building Com.

Tenn., Chattanooga.—Trigg, Dobbs & Co. let contract to Mark K. Wilson, Chattanooga, to erect branch warehouse; 50x140 ft.; Chas. E. Bearden, Archt., Chattanooga.

Tex., Houston.—City let contract at about \$12,000 to Horton & Horton, Houston, to construct 6 reinforced concrete fire walls at municipal cotton sheds; E. E. Sands, City Engr. (Lately noted.)

Tex., Houston.—Farmers' Warehouse Co. let contract to A. T. Schmitz & Son, Houston, to erect warehouse; corrugated iron; 70x400 ft.; 1 story; cost \$11,000.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Andalusia.—Construction of a railroad from Andalusia to Munson, Fla., 30 mi., is reported contemplated. Central of Georgia Ry. believed to be interested. C. K. Lawrence, Savannah, Ga., is Ch. Engr.

Ark., Corning.—North Arkansas Utilities Co., capital \$75,000, is inceptd. to build and operate power plant, railroads, etc.; incorporators, George A. Booser, C. L. Daniel, Elizabeth Morrison, H. B. Hays and Thos. Neely. Mr. Daniel says it is not contemplated to build a railroad for possibly 18 months at least.

Ark., Newport.—Missouri Pacific Ry., it is reported, will spend about \$600,000 soon for repairs and improvements to its White River division. E. A. Hadley is Ch. Engr. at St. Louis, Mo.

Ga., Cordele.—Georgia Southern & Florida Railway, it is reported, will spend \$25,000 to build a new yard near Cordele. J. B. Munson, Macon, Ga., is V.-P. and Gen. Mgr.

Ga., Lula.—Lula-Homer R. R. Co., C. J. Hood of Commerce, Ga., Pres., has completed considerable grade on its proposed line from Lula to Homer, 14 mi., and is also surveying from Homer to Carnesville. Wm. J. Redmond of Atlanta is contractor. Line may be built from Belton, Ga., to Anderson, S. C., 65 or 70 mi. D. J. Zeigler is Ch. Engr.

Ga., Warrenton.—Savannah & Northwestern Ry. is reported surveying for its contemplated extension from St. Clair to either Thomson, Camak or Norwood, about 30 mi. L. B. Ackerman is Ch. Engr. at Savannah, Ga.

Ky., Benham.—Engineers are reported making location survey for the proposed extension of the Kentucky & Virginia R. R. (Louisville & Nashville system) from Benham, along Poor Fork of Cumberland River, through coal regions in Letcher county. A report that an extension to Morton, Va., would be built is denied. H. C. Williams is Ch. Engr. of Constr. of the Louisville & Nashville at Louisville, Ky.

Ky., Pikeville.—Yellow Poplar Lumber Co. has bought timber on Shelby Creek and will build narrow-gauge railroad.

Md., Hagerstown.—Survey for Baltimore & Ohio R. R. branch to Security, 4 mi., has been completed by J. B. Ferguson & Co. Construction is expected soon. F. L. Stuart, Baltimore, is Ch. Engr.

Miss., McComb.—Guy M. Walker of New York, who is reported to have bought the McComb Electric Light & Power Co., through S. M. Jones of Laurel, Miss., also contemplated building interurban railway from Mc-

Comb to Summit, Fernwood and Magnolia, with street railway in McComb.

N. C., Andrews.—Hiwassee Valley Ry. Co. directors have authorized \$125,000 bonds to be sold to complete construction of line from Andrews via Peachtree to Haynesville, 25 mi. Address S. E. Cover.

N. C., Asheville.—Perley & Crockett, lumber manufacturers, Black Mountain, N. C., will, it is reported, extend their Mount Mitchell R. R. about 1 mi. to a point near the summit, where a hotel site is chosen.

N. C., Belmont.—Piedmont & Northern Traction Co. is expected to build a spur from its Gastonia line to Belmont. E. Thomason is V.-P. and Gen. Mgr. at Charlotte, N. C.

N. C., Durham.—Chapel Hill and Bingham townships of Orange county have voted almost unanimously to issue bonds in aid of the Alamance, Durham & Orange Ry. & Electric Co., of which Junius H. Hardin of Burlington, N. C., is Pres.

N. C., Goldsboro.—Virginia Lumber & Box Co., says a report, will immediately begin construction of a railroad from Goldsboro to Seven Springs, about 14 mi. Wm. L. Nufer of Petersburg, Va., is Pres.

N. C., Kinston.—Kinston Belt Line Co., capital \$25,000, is chartered to build steam belt-line railroad; also electric car line; incorporators, J. T. Deal, R. C. Deal, Thurman Deal and M. L. Garrison of Norfolk, Va., and Wm. S. Spottwood and G. V. Cowper of Kinston.

N. C., Morganton.—Bonds voted in Burke county to aid the proposed Virginia-Carolina Midland R. R. are as follows: Morganton township, \$50,000; Upper Fork township, \$15,000; Lower Fork township, \$25,000; all 6 per cents. Manly McDowell or O. Elam of Shelby, N. C., may give information. J. M. Brinkley is Chrmn. and J. B. Holloway Clerk Burke County Comms. at Morganton.

N. C., Sanford.—Surveys are made and it is expected that construction of the Central Carolina Ry. from Lillington to Swansboro, N. C., will soon begin. W. J. Edwards of Sanford and others are interested.

Okla., Henryetta.—The projected interurban electric railway under consideration would connect Henryetta with Rich Hill, Blackstone, Pleasant Valley and Calton, in addition to Dewar and Kusa. James Liggett may be able to give information; also the Board of Trade.

S. C., Sumter.—Chamber of Commerce is promoting plans and seeking capital for building a railroad from Sumter to Shiloh,

Turbeville and Olanto, 32 mi. R. F. McLellan of Sumter is Ch. Engr. Address E. I. Reardon, Secy. Chamber of Commerce, and also of Railroad Committee, of which D. D. Moise is Chrmn. and G. A. Lemmon Treas.

Tenn., Chattanooga.—Survey has been made by the Nashville, Chattanooga & St. Louis Ry. for an extension to connect with the Cravens Incline. Hunter McDonald, Nashville, is Ch. Engr.

Tenn., Shelbyville.—Nashville, Chattanooga & St. Louis Ry. is expected to build belt line to the Sylvan, the Riverside and the Valley cotton mills. Hunter McDonald, Nashville, Tenn., is Ch. Engr.

Tex., Big Springs.—Texas & Pacific Ry. is considering plan to build branch from either Big Springs or Midland to Seminole, Tex., about 50 or 60 mi. C. H. Chamberlin, Dallas, Tex., is Ch. Engr.

Va., Clifton Forge.—Chesapeake & Ohio Ry. has let contract to J. C. Carpenter and Major Bros. of Clifton Forge to double-track line between Greenlee and Balcony Falls, work to start immediately.

Va., Lynchburg.—Southern Railway Co. has awarded contracts for more double-track construction, as follows: Arrowhead to Elma, Va., 20 mi., to W. W. Boxley & Co., Roanoke, Va.; Sycamore to Gretna, Va., 4 mi., to the Hall-Crawford Construction Co. of Macon, Ga.; Whittles to Dry Fork, Va., 9.7 mi., to Robert Russell of Danville, Va.

W. H. Wells, Washington, D. C., is Ch. Engr. of Construction.

Va., Petersburg.—Vaughan Construction Co. of Roanoke and Petersburg has graded 4 mi. and cleared about 5 mi. additional of right of way for the Petersburg & Appomattox Railway Co.'s electric line from Petersburg to Hopewell and City Point, about 10½ mi. T. M. Wortham, Richmond, Va., is Pres. of the road.

Va., Roanoke.—J. J. Boxley & Sons of Roanoke have been given a contract by the Norfolk & Western Ry. to double-track several miles of line near Ripplemead, Va., work to begin immediately.

W. Va., Charleston.—Coal & Coke Ry. Co. is reported contemplating construction of yards, etc., at Charleston. R. H. Pembroke, Gassaway, W. Va., is Ch. Engr.

W. Va., Mistletoe.—Royal Black Coal Co. will build half a mile of railroad and half a mile of sidings in connection with mining operations. S. E. Bradley is Pres. and Treas. at Madison, W. Va., and J. F. Thompson is V.-P. at Mistletoe.

STREET RAILWAYS

Mo., St. Louis.—United Rys. proposes to build an extension of its Taylor Ave. line from Pope Ave. to Broadway. R. McCulloch is Pres. and Gen. Mgr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Asbestos Curtains.—Verus T. Ritter, Archt., Huntington, W. Va.—Names and addresses of asbestos curtain manufacturers.

Automobiles, etc.—Syndicat General des Grands Marchands de Cycles et d'Automobiles en France of 59, Avenue de la Grande Armer, Paris, France.—To correspond relative to French trade for automobiles, motorcycles, parts thereof, etc.

Automobile Materials, etc.—Tng. E. Macchi, 35 Via Mario Pagano, Milan, Italy.—Interested (view to agencies) in materials for automobiles, airships, shop machinery, etc.

Bed Manufacturers.—Dezell Enterprise Co., James A. Dezell, Pres., Greensboro, Fla.—To correspond with manufacturers relative to arranging for manufacture of patented bed.

Bookbinding Equipment, etc.—Pablo Gutierrez, Cochabamba, Bolivia.—To correspond relative to representing manufacturers of bookbinding equipment, clothing, cotton goods, embossing outfits, packages for fitting space on ships, etc.

Bridge Construction.—Pitt County Comms., Brascoe Bell, Clerk, Greenville, N. C.—Bids until Oct. 4 to construct small steel bridge, wood floor with concrete abutments on piling; plans and specifications obtainable from Clerk of Board or W. C. Dresback, Civil Engr., Greenville.

Bridge Construction.—Lincoln County Comms., A. C. Parsons, Pres., Hamlin, W. Va.—Bids until Oct. 6 to erect 3 bridges as follows: Across Cobbs Creek at McCorkle, Mud River at Fox and Trace Fork at Bowes Mill; also substructures for each; plans and specifications on file office of Oliver & Maupin, Engrs., Huntington, W. Va.

Bridges (Steel).—Rowan County Commissioners, M. E. Miller, County Engr., Salisbury, N. C.—Receive bids at courthouse Oct. 4 for 22 steel bridges.

Brushes and Handles.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 19 on deck-scrubbing brushes, various deliveries, and 1500 handles for deck-scrubbing brushes, delivery Portsmouth, Norfolk; both schedule 8812.

Canal Construction.—Dept. of Interior, U. S. Reclamation Service, A. P. Davis, Ch. Engr., Washington, D. C.—Bids at office United States Reclamation Service, Montrose, Col., until Oct. 20 for construction about 11 mi. of Ironstone Canal, Uncompahgre Valley Project, in vicinity Olathe, Col.; work involves excavation of about 200,

200 cu. yds. material in open cut; for particulars address United States Reclamation Service, Montrose; Tramway Bldg., Denver, Col., or Washington.

Cables.—L. C. Acree, Chrmn. Joint Committees on Fire, Light and Electricity of Common Council and Board of Aldermen, Lynchburg, Va.—Bids until Oct. 4 for manufacture and delivery of underground alloy covered cables of fire alarms and police signal systems; for specifications and other particulars apply to W. L. Kent, City Electrician.

Chemicals.—Paquet & Toutan, 57 Rue des Archives, Paris, France.—To correspond relative to representing manufacturers of chemicals, including carbonate barytes, soda and potash bichromates, potash, etc.

Comb (Horn) Machinery.—Salamy & David (manufacturers) agents for South America, Egypt and near East, 40 Wall St., New York.—Interested in machinery for manufacture of horn combs.

Concrete Work.—Granite Mfg. Co., Granite Falls, N. C.—Bids until Oct. 4 for concrete work in connection with raising dam; 3000 yds. concrete, 30 per cent. to be reinforced, etc.; plans, etc., on deposit of \$25 at 902 Realty Bldg., Charlotte, N. C., and office A. A. Shuford, Hickory, N. C. Tucker & Laxton, Engrs., 900 Independence Bldg., Charlotte.

Copper Bands.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 12 on 144,900 lbs. rotating copper bands, schedule 8806, delivery f. o. b. works.

Corn Mill, etc.—G. W. Simmons Co., 28 S. Front St., Memphis, Tenn.—Vertical or horizontal cornmeal and feed grinder; first-class machines, second-hand, in good order.

Contractors' Machinery.—See Lathes, etc.—A. Hayem fils Ainc.

Cotton Dress Goods.—W. O. Coole, Marquess, W. Va.—Addresses of cotton dress goods manufacturers.

Cotton Canvas.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 12 on cotton canvas, schedule 8819, delivery Brooklyn.

Cotton Goods.—See Bookbinding Equipment, etc.—Pablo Gutierrez.

Cotton Thread (Sewing).—Bensusan, Sides & Co., Salonique, Greece.—Samples and prices of sewing thread, on spools and in balls of various weights, to be delivered at Salonique, c. i. f. prepaid and war risks

Ch. Engr.

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insured; no charge for packing; payment to be in cash, with 5 per cent. discount, when credit is established and confirmed.

Dredging.—Navy Dept., Bureau Yards and Docks, H. R. Stanford, Ch. of Bureau, Washington, D. C.—Bids until Oct. 9 for dredging at navy-yard, Norfolk; plans and specifications (Specification No. 2189) obtainable on application to bureau or to commandant of navy-yard named.

Drying and Grinding Machinery.—E. C. Epes, Richmond, Va.—Equipment for drying and grinding tobacco stems.

Electric Plant Supplies.—D. M. Cline, Mayor, Granite Falls, N. C.—"Prices on lights, supplies, etc." (City is installing municipal electric-lighting system to cost within \$2000.)

Electrical Coal-cutting Equipment. See Mining Machinery—Royal Block Coal Co.

Electrical Machinery.—C. L. Daniel, North Arkansas Utilities Corp., Corning, Ark.—500 and 350 K. W. horizontal turbine generator; can use second-hand, good condition.

Electrical Machinery.—Comms. of Port, Ernest M. Laeb, Pres., New Orleans, La.—Bids until Oct. 13 for furnishing and installing 100 K. W. and 200 K. W. motor generator set, equipment for series circuit and switchboard for cotton warehouses and terminal on Mississippi River; deposit \$1000 in cash or certified check required; plans and specifications on file at office Ford, Bacon & Davis, Engrs., 521 Canal St., New Orleans; full sets furnished to prospective bidders on deposit \$10.

Elevator.—Lee Duke, Carthage, Tenn.—Hand-power elevator for tobacco rehandling house.

Embossing Equipments.—See Book-binding Equipment.—Pablo Gutierrez.

Engine (Gas).—See Flour Mill.—W. A. Carver.

Engines and Pumps.—Water-works and Sewerage Board, Scotland G. Highland, Secy., Clarksburg, W. Va.—Bids until Oct. 21 to furnish and install 2 gas engines and 2 pumps at municipal pumping station; plans and specifications on file with Board and at office Geo. W. Fuller, Consult. Engr., 170 Broadway, New York, from whom copies may be obtained; proposals on blank forms obtainable from Secy. or Consult. Engr.; drawings and specifications showing arrangement and construction of machinery offered and important dimensions of parts and material used in construction to be submitted with proposals; bids to be separately for contracts A and B.

Excavation.—City Secy., Houston, Tex. Bids until Oct. 4 for dry excavation on south side of Houston Ship Channel near Turning Basin; specifications and information obtainable from E. E. Sands, City Engr.; Ben Campbell, Mayor.

Excavation.—Directors Cameron County Irrigation Dist. No. 1 of Cameron County, Harlingen, Tex.—Bids until Oct. 21 to extend canals; 510,230 cu. yds. excavation; plans and specifications on file at office of Dist. Directors.

Fans (Motor-driven).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 19 on 2 motor-driven fans, schedule 8813, delivery Mare Island, Cal.

Feed Mill Machinery.—W. C. Wood-leaf, Consult. Engr., Dallas, Tex.—Data and prices on machinery for feed mills for making mixed balanced feed from alfalfa, cottonseed meal, hulls, "black-strap," etc.

Fireproof Devices.—See Stage (Theatrical) Equipment.—Verus T. Ritter.

Flour Mill.—W. A. Carver, Rougemont, N. C.—Second-hand roller process machinery for 24-hour capacity 25 to 35 bbls. flour; 25 engine power.

Flour Mills.—M. P. Snuffer, Pemberton, W. Va.—10-bus. per hour cleaner and scourer with shoe and small size reel; possibly combined burs and bolting outfit; good second-hand will answer purpose.

Forms (Steel, Column).—Thaw & Williams, Contrs., Bell Block, 6th and Vine Sts., Cincinnati, O.—Description and prices on steel forms for circular columns; 16, 24 and 36 in. diam.; 10 of each; all to be surmounted with forms for conical caps sloped on 45-degree angle; will consider sale or rental.

Frames and Covers for Flooding and Sluice Valves, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Oct. 18 on frames and covers for flooding and sluice valves, circular steel stairways, crane runways, ladders and cutter heads for dredge, switch points, frogs, cast-iron face and floor plates,

lathe, upright drill, switchboards, voltmeter, steel cable, barbed wire, steel or iron pipe, copper tubing, bronze-wire cloth, wire staples, rivets and burrs, chisels, blacksmith flatters, files, blacksmith punches, hammers, hatches, saws, saw blades, scythe blades, tinner's shears, taps, reamers, stocks and dies, drills, bits, vises, carpenter's braces, portable forges, wrenches, snaths, oars, oarlocks, rakes, fusible plugs, marine clocks, steam gauges, water gauges, steam whistles, automobile bells, marine lights, steam gauge lamps, oil cups, grease cups, window glass, water coolers, chinaware, agate cups and pitchers, glass pitchers, drinking glasses, cake griddles, soup spoons, doormats, towels, cork board, leather filets, asbestos cement, rubber bands, paper clips, pencils, bond paper and lumber; blanks and general information relating to this circular (No. 974) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Grading.—Tennessee River Bridge Committee, Theo. F. King, Chrmn., Chattanooga, Tenn.—Bids until Sept. 29 at office of County Judge, County Courthouse Bldg., to construct 2 earth, chert or gravel fills to north

Ice Machinery.—W. W. Parker, care 106 W. Martin St., Cary, N. C.—Catalogues and prices on 1/2-ton ice plant.

Ice Manufacturing Machinery.—Crystal Ice Co., Alpena, Mich.—Names and addresses of builders of ice manufacturing machinery.

Implements.—See Lathes, etc.—A. Hayem Filis Aine.

Ironworking Machinery.—See Machine Tools, etc.—Ammons Fire Alarm System.

Lathe (Axle).—G. W. Simmons Co., 89 S. Front St., Memphis, Tenn.—Defiance or Hoyt Bros. latest type axle turning lathe; second-hand; guaranteed good operating condition.

Lathes, etc.—A. Hayem Filis Aine, Bureau 11 and 15 Rue du Maine, 16 Rue Bon-
teux-Dumas, Neuilly, sur Seine, France.—To correspond relative to representing manufacturers of lathes, agricultural implements, machinery for public works, etc.

Levee Construction.—State Board of Engrs., New Orleans, La.—Bids until Oct. 5 to construct following levee work: Willow Chute levee, Bossier parish, Red River, left bank new levee, contents 55,000 cu. yds.; Gold Point Spur levee, Bossier parish, Red River, left bank new levee, contents 15,000 cu. yds.; Riverside levee, Bossier parish, Red River, left bank new levee, contents 125,000 cu. yds.; Colquitt Point levee, Bossier parish, Red River, left bank new levee, contents 26,000 cu. yds.; Pat Cash levee,

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

We issue every Business Day in the Year THE DAILY BULLETIN

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

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and south ends of Market-St. bridge across Tennessee River; north approach fill to contain about 16,500 cu. yds.; south approach about 9000 cu. yds.; both fills to be built in 18-in. layers and rolled with 10-ton roller; bids will be asked for making north approach fill or south approach fill separately, or contract for both may be let to same bidder.

Grinding Machinery.—See Drying and Grinding Machinery.—E. C. Epes.

Grist Mill.—J. E. McLaughlin, care Mutual Life Insurance Co. Office, Wadesboro, N. C.—Data and prices on small grist mill.

Guns and Ammunition.—W. O. Coole, Marquess, W. Va.—Names and addresses of manufacturers of guns and ammunition.

Grinding Machinery.—See Corn Mill, etc.—G. W. Simmons Co.

Hardware, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 12 on following, schedule 8822: Hacksaw blades and miscellaneous hammers, delivery East; 200 gross brass spur grommets, delivery Brooklyn; 2200 padlocks, delivery Brooklyn, Philadelphia; iron block planes and hand saws, delivery Philadelphia; screw-drivers, delivery Norfolk; also files, schedule 8814, delivery Washington.

Heating Plant.—See Frames and Covers for Flooding and Sluice Valves, etc.—Panama Canal.

Heating Plant.—A. C. Read, Mayor, Carthage, Tenn.—Hot-air or steam-heating plant for new high-school building.

Bossier parish, Red River, left bank new levee, contents 60,000 cu. yds.; Rocky Bayou levee, Rapides parish, Red River, left bank new levee, contents 44,000 cu. yds.

Lighting Fixtures.—E. W. Gregory, Manchester, Md.—Prices on electric-lighting (jump spark) fixtures for lighting acetylene gas.

Lithographing and Engraving Supplies, etc.—See Stationers' Supplies, etc.—Standard Printing Co.

Looms (Silk and Ribbon).—Salamy & David (manufacturers' agents for South America, Egypt and near East), 40 Wall St., New York.—Interested in silk piece looms and ribbon looms.

Machine Tools, etc.—Ammons Automatic Fire Alarm System, J. B. Ammons, Union National Bank Bldg., Houston, Tex. Special and standard machinery for manufacturing automatic fire alarm system; machinery to include hand and power drill press, band saw to cut brass sheets, milling machine, jointer, rip and cut-off saw with table, bending machine, punching presses, dies, cutting and shaving machine for metal, etc.; further particulars at office of Manufacturers Record; for complete details, blueprints, etc., address Mr. Ammons at Houston.

Manufacturers.—Paquet & Toutan, 57 Rue des Archives, Paris, France.—To correspond with manufacturers relative to developing trade in France.

Manufactured Products.—J. Massignon, 24 Rue de l'Epinette, Saint-Mande

(Seine).—To correspond relative to representing American manufacturers.

Manufactured Products.—American Commissions Office, Calle Buenos Aires 585, Montevideo, Uruguay.—To correspond relative to representing American manufacturers.

Manufactures.—N. V. L. E. Tels & Co's., Sulkerstraat Wijk F., Soerabaja, Java.—To correspond with American manufacturers of various miscellaneous products in regular demand; sends list, now on file with Manufacturers Record; list names metal work, hardware, chemicals, cotton cloth, clothing, bicycles, sewing machines, shoes, decorated tin boxes, chinaware, copper, enamels, hosiery, bar iron, plain and corrugated galvanized sheets, vehicle lamps, leather for various kinds of manufacturing, paints, fountain pens, polishes, razors, sandery, shovels, toys, watches, wire cloth, barbed wire, sporting goods, etc.

Metals.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 12 on steel drop forgings, schedule 8806, delivery f. o. b. works; steel forgings, schedule 8815, delivery Washington; medium bar steel and steel floor plates, schedule 8817, delivery Norfolk.

Metal-working Machinery.—See Machine Tools, etc.—Ammons Automatic Fire Alarm System.

Mining Machinery.—Royal Block Coal Co., S. E. Bradley, Pres., Madison, W. Va.—Ready for bids on mining machinery, to include gravity screen, electrical cutting and hauling equipment, etc.

Motorcycles.—See Automobiles, etc.—Syndicat General, etc.

Packages.—See Bookbinding Equipments. Pablo Gutierrez.

Paving.—H. A. Rexroad, City Clerk, Pawnee, Okla.—Bids until Oct. 4 on about 20,000 sq. yds. paving; vertical fiber vitrified brick blocks with cement grout filler and sand cushion laid on concrete base; plans and specifications obtainable for \$5 at office of Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City.

Paving.—Comms., Thos. H. Johnson, Commr. of Streets and Public Works, Pensacola, Fla.—Bids, addressed to C. W. Eggar, City Clerk, received until Oct. 17 to grade, curb and pave certain streets; about 4000 sq. yds. pavement and 1500 lin. ft. concrete curb; specifications, etc., obtainable from L. E. Thornton, City Engr.

Paving.—O. B. Bonar, City Clerk, Moundsville, W. Va.—Bids until Oct. 11 to construct brick pavement and cement curb on sections of Grant Ave. and 4th St.; also to pave with brick sections of Lockwood and Western Aves. and 7th St.; bids received for paving with vitrified paving brick or vitrified paving block with sand, cement or tarvia filler; instructions to bidders, specifications, etc., on file with Alex. Purdy, City Engr.; bids for part or all of paving.

Paving, etc.—C. C. Pashby, City Clerk, Memphis, Tenn.—Bids to improve N. and S. Front St. from Court to Monroe Ave., ordinance No. 363. Pavement—3650 sq. yds. stone block pavement removed; 6 solid curb corners removed; 180 lin. ft. 6x20-in. granite curb removed; 25 sq. yds. concrete gutter removed; 300 cu. yds. concrete bushing; 3650 sq. yds. wood block pavement; 100 sq. yds. stone block pavement adjusted; 20 sq. yds. asphalt pavement adjusted; 144 lin. ft. 6x20-in. radius granite curb corners furnished and set; 100 sq. yds. concrete foundation removed. Drainage—1 drop inlet and grating removed; 1 No. 8 inlet; 1 inlet for drop grating; 48 lin. ft. 12-in. cast-iron pipe furnished and laid; work to be let as whole; specifications and profiles on file with City Engr. and obtainable for \$5; E. H. Crump, Mayor; bids until Sept. 23.

Paving.—City Com., T. C. Russell, Chrmn., Terrell, Tex.—Bids until Oct. 12 to improve Francis St. from Nash Ave. to State St.; separate bids on crosotred wooden block on concrete foundation; brick pavement of concrete foundation; Ada (Okla.) or Texas rock asphalt; gravel; asphalt macadam; Hassam compressed concrete pavement; bitulithic; concrete curbs and gutters; specifications obtainable from Herbert Brewster; J. Trueheart, City Secy.; T. C. Russell, Chrmn. City Com.

Paving.—Comms. District of Columbia, 509 District Bldg., Washington, D. C.—Bids until Oct. 19 to pave streets with sheet asphalt, asphalt blocks and bitulithic; specifications, proposal forms and information obtainable from Chief Clerk Engr. Dept., Room 427 District Bldg., Washington.

Paving.—City Council, Athens, Tex.—Bids until Sept. 30 for street work, to include claying, graveling, concrete guttering

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

and curbing; cost \$15,000; plans and specifications on file; W. W. Jarrell, Mayor.

Paving.—Board of Public Works, Roger G. McGrath, Secy., Louisville, Ky.—Bids until Oct. 4 to construct with asphalt Chestnut St. from 24th to 26th St.; plans and specifications on file with Board of Public Works.

Peanuts.—W. O. Coole, Marquess, W. Va. Prices on peanuts in large quantities for roasters.

Pipe.—See Road Construction, etc.—Whitley County Court.

Pipe, etc.—Dept. of Justice, Office Supt. of Prisons, Washington, D. C.—Bids until Oct. 21 to furnish and deliver at U. S. Penitentiary, Atlanta, Ga., plumbing pipe, fittings and materials for west main cell wing; copies of specifications obtainable on application.

Pipe and Specials.—City Commrs., Galveston, Tex.—Bids until Oct. 7 at office of John D. Kelley, City Secy., to furnish f. o. b. factory, freight allowed to Galveston, cast-iron pipe and fittings as follows: 200 pieces 12-ft. lengths, class D pipe, 30 in. diam., as per Standard American Waterworks Association specifications; 50 pieces 12-ft. lengths, flexible joint pipe, 30 in. diam., class D, with flexible bell and standard spigot; 50 pieces 12-ft. lengths, flexible joint, 30 in. diam., class D, with standard bell and flexible spigot; 4 pieces 1-16 bends, 30 in. diam., class D; all flexible joints to be what is known as type No. 2 or metropolitan joint; payment to be made upon completion of entire work at unit prices bid; M. E. Shay, Commr. Water-works and Sewerage; A. T. Dickey, City Engr.

Postoffice Equipment.—W. S. McClelland, Eustis, Fla.—Complete equipment for postoffice.

Pottery.—Republic Cotton Mills, Store Dept., Great Falls, S. C.—Names and addresses of manufacturers of fancy pottery; such as vases and art boxes for flowers to decorate yards and parks.

Provisions.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 26 on provisions, schedule 8827, as follows: 15,000 lbs. tinned bacon, 10,000 lbs. tinned peas and 1000 gals. syrup, delivery Puget Sound; 30,000 lbs. tinned lima beans, 30,000 lbs. tinned string beans, 14,000 gals. California white beans, 80,000 lbs. tinned corn beef, 35,000 lbs. tinned corn, 10,000 lbs. macaroni, 30,000 lbs. tinned pears, 17,000 lbs. baking powder, 800 lbs. curry powder, 50,000 lbs. rice, 1000 lbs. assorted spices, 150,000 lbs. sugar in sacks, 80,000 lbs. No. 3 tinned tomatoes and 5000 gals. vinegar, delivery Mare Island; 130,000 lbs. lard, 338,000 lbs. evaporated milk and 55,000 lbs. salt, delivery Mare Island, Puget Sound.

Pneumatic Hoists, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Oct. 20 to furnish pneumatic hoists, hydraulic jacks, magnetic chucks, spring steel, pig-iron, pig-lead, malleable-iron castings, bronze bars, nails, twist drills, reamers, pipe wrenches and parts, gongs, building brick, fire brick, fire clay, foundry clay, silica grit, silica sand, wrapping and blueprint paper, etc., etc.; blanks and general information relating to this circular (No. 976) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Press (Power).—Lee Duke, Carthage, Tenn.—Power press for tobacco rehandling house.

Pumps.—See Engines and Pumps.—Water-works and Sewerage Board, Clarksburg, W. Va.

Road Binder.—Ball County Fiscal Court, Pineville, Ky.—200,000 gals. road binder, delivered at Middlesboro and Pineville during balance of 1915 and 1916; bids until Sept. 25; T. J. Asher, County Judge.

Road Construction.—Clay County Commissioners, Green Cove Springs, Fla.—Bids until Oct. 6 to construct about 30 mi. road; plans and specifications at Clerk's office, Green Cove Springs; M. W. Griffin, Clerk Circuit Court.

Road Construction.—Tate County Supervisors, J. A. Wooten, Clerk, Senatobia, Miss.—Bids until Oct. 4 to construct levee across Hickahala Bottom on Memphis and Oxford Rd.; bids to be submitted for cu.

yd.; plans and specifications on file in Chancery Clerk's office.

Road Construction, etc.—Whitley County Court, E. F. White, Clerk, Williamsburg, Ky.—Bids until Oct. 4 to construct and improve road from Williamsburg to McCreary county line; single bid for entire work; plans and specifications on file at County Road Engr.'s office; also receive bids on drain pipe to conform to State's specifications; proposals, estimated quantities and particulars furnished on application.

Road Construction.—Washington County Commrs., Barry M. Hartle, Clerk, Hagerstown, Md.—Bids until Oct. 5 to construct 1.89 mi. State-aid highway upon or along road leading from Indian Springs to Big Pool, and 1.10 mi. on road between Williamsport and Clearspring; bids to be made on blank forms furnished by State Roads Com., Garrett Bldg., Baltimore; plans can be seen and forms of specification and contract for \$1 at office State Roads Com.

Road Construction.—Coke County Pike Com., Geo. W. Gorrell, Chmn., Newport, Tenn.—Bids until Oct. 16 to grade and macadamize roads, expending \$150,000; work divided into 9 contracts; bids received on each group separately and on entire work; plans and specifications on file with County Engr., Newport.

Road Construction.—Wilcomico County Commrs., Salisbury, Md.—Bids until Oct. 12 to construct 2-mi. section State-aid highway upon or along Salisbury-Anderson's Mill Rd. between Salisbury and Anderson's Mill; bids on blank forms obtainable from State Roads Com., 601 Garrett Bldg., Baltimore; plans can be seen and forms of specifications and contract obtained for \$1 from State Roads Com., Baltimore; H. M. Clark, Roads Engr.

Road Construction.—Talbot County Commrs., Jos. B. Harrington, Clerk, Easton, Md.—Bids until Oct. 5 to construct section State-aid highway upon or along Harrison St. Ext. between town limits of Easton and Talbot County Fair Grounds; 1800 ft.; concrete, macadam or shell construction; bids to be made on blank forms, obtainable from State Roads Com., Garrett Bldg., Baltimore, Md.; plans can be seen and forms of specifications and contract obtained for \$1 from State Roads Com.

Road Construction.—Permanent Road Commrs., M. W. Raley, Secy., Terrell, Tex.—Bids until Oct. 28 to construct gravel macadam roads in Terrell Road Dist.; bidders may estimate on different classes of material for delivery only, or for construction and delivery of material; estimated cost \$300,000; instructions to bidders, specifications, proposal forms and profiles on file at First National Bank, Terrell, and at office of Bartlett & Ranney, Engrs., San Antonio and Dallas, Tex.; extra sets exclusive of profiles may be obtained for \$10; Jas. A. Cooley, County Judge, Kaufman, Tex.

Road Construction.—Lowndes County Highway Commission, Columbus, Miss.—Will let following contracts Oct. 13: Supervisors' Dist. No. 4, contract for 35 mi. macadam road, to be graded, drained and surfaced with rock; Artesia Rd. Dist., contract for 1½ mi. macadam road, graded, drained and surfaced with rock; Bent Oak Rd. Dist., 5 mi. macadam road, graded, drained and surfaced with rock; Gus E. Hauser, Consult. Engr., Columbus.

Road Machinery.—T. J. Vermillion & Son, Barboursville, Ky.—Prices on roller and other road-working machinery.

Sash Weights.—W. B. Greaves, manufacturers' agent, Hotel Cotton, Houston, Tex.—Names and addresses of sash weight manufacturers in Baltimore, New York and its vicinity.

Saws.—See Machine Tools, etc.—Ammons Automatic Fire Alarm System.

Screens.—See Mining Machinery—Royal Block Coal Co.

Sewer System.—M. J. Harris, Mayor, and Board of Aldermen, Albemarle, N. C.—Bids until Oct. 15 to construct about 4 mi. vitrified and cast-iron sewers, 6 to 20 in. diam., complete with appurtenances; plans and specifications on file offices of City Clerk and of Anderson & Christie, Consult. Engrs., Charlotte, N. C., and may be obtained from J. D. Spinks, Engr. in charge, Albemarle.

Sewer Construction.—City of Joplin, Mo., J. B. Hodgdon, Commr. of Streets and Public Improvements.—Bids until Sept. 28 to relocate East Joplin public sewer, estimated to cost \$1265.90, and until same date to construct storm sewer on D St. from Joplin to Main St.

Sewer Construction.—City Secy., Houston, Tex.—Bids until Oct. 11 to construct

storm sewers on San Jacinto St. from Capitol to Rusk Ave., Hathaway St. from Baldwin to Crocker St., and Garrett and Ross Sts. from W. Alabama to Jack St.; separate bids on each of above items; specifications and information obtainable from E. E. Sands, City Engr.; Ben Campbell, Mayor.

Sewer Construction Materials.—See Water and Sewer System Materials.—City of Hertford, N. C.

Sewer Construction.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Oct. 13 to build sand bed and concrete channel at sewage-disposal works, Sanitary Contract No. 163; specifications and plans obtainable from Sewerage Com., 904 American Bldg., for \$5; quantities are 3350 cu. yds. excavation; 450 cu. yds. embankment; 2800 cu. yds. of sand for sand bed; 165 cu. yds. of gravel for sand bed; 125 cu. yds. concrete; 7700 lbs. of reinforcing steel; 3100 lin. ft. 4-in. unglazed tile; Chas. England, Chmn. Sewerage Com.

Stage (Theatrical) Equipments.—Verus T. Ritter, Archt., Huntington, W. Va. Names and addresses of manufacturers of stage equipments, including all fireproof devices; scenery, asbestos curtains, etc.

Skewers (Wire Meat).—B. S. Robertson, Hotel Rocky Mount, Rocky Mount, Va. Addresses of manufacturers of wire meat skewers.

Stationers' Supplies, etc.—Standard Printing Co., 606 W. Michigan Ave., Tampa, Fla.—Correspondence (view to agencies) with manufacturers of lithographing, engraving, steel die stamping, sales or order sheets, sales books, etc., suitable for handling in sales department of printing establishment.

Steam Shovel.—Koehler Bros.-Fowler Construction Co., 68 W. Court Ave., Memphis, Tenn.—Second-hand ¾-bucket steam shovel.

Steam Shovels (Revolving).—Oliver-Hill Construction Co., Bank and Trust Bldg., Knoxville, Tenn.—Prices on new and second-hand revolving these shovels.

Theater Equipment.—E. W. Gregory, Manchester, Md.—Prices on second-hand scenery for stage 18 ft. wide and 12 ft. high.

Trade Mark (Wood-burning) Outfit.—Samuel B. Coffin, Inc., furniture manufacturer, High Point, N. C.—Data and prices on outfit for burning (with die) trade-mark in wood of manufactured goods.

Truck (Gasoline Motor).—City of West Palm Beach, Fla., A. M. Lopez, City Clerk.—Bids until Oct. 21 on ½-ton gasoline motor truck for hauling garbage; body must be covered, have 3 yds. capacity and be of dump type, to be operated by one man; plans and specifications to accompany bids.

Truck (Storage Battery).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 12 on storage battery truck, schedule 8895, delivery Norfolk, Va.

Wagons (Garbage).—See Trucks (Gasoline Motor).—City of West Palm Beach, Fla.

Water and Sewer System Materials.—City of Hertford, N. C.—Bids until Oct. 12 on material and equipment for water and sanitary sewer system; includes two 750 G. P. M. steam fire pumps; 400 G. P. M. centrifugal pump; 25 H. P. high-speed motor; 60,000-gal. steel tank on 75-ft. tower; 89,000 cu. yds. sand; 55 tons 1½-in. crushed stone or gravel; 93 cu. yds. sand; 179 bbls. Portland cement; 29 bbls. lime; 96 ft. 10-in. cast-iron pipe, class A; 3048 ft. 8-in. and 11,112 ft. 6-in. cast-iron pipe, class B; specials, fittings, hydrants, valves and boxes, pig lead and jute; 4318 ft. 10-in. and 10,523 ft. 8-in. T. C. sewer pipe and special branches; manhole and flush tank rings, steps, etc. Address all inquiries to J. B. McCrary Co., Engr., 1408 Third National Bank Bldg., Atlanta, Ga.

Water Main.—City Commrs., Galveston, Tex.—Bids until Oct. 14 at office of John D. Kelley, City Secy., for complete installation of submerged 30-in. cast-iron water main across part of Galveston Bay near causeway; length about 3600 lin. ft.; city to furnish pipe, fittings and specials; contractor to furnish all other material and labor; plans, details and specifications on file with A. T. Dickey, City Engr.; M. E. Shay, Commissioner of Water-Works and Sewerage.

Wheat.—Clinton Milling Co., Clinton, N. C.—In market for No. 2 milling wheat.

Wood-burning Equipment.—See Trade Mark (Wood-burning) Outfit.—Samuel B. Coffin, Inc.

Woodworking Machinery.—See Machine Tools, etc.—Ammons Automatic Fire Alarm System.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Fla., Dundee.—State Bank of Dundee has filed articles of incorporation; capital \$10,000; incorporators, J. C. Rabon, Pres.; G. B. Skipper, V.-P.; T. L. Wilson and E. E. Skipper of Bartow, Fla.

Fla., Miami.—The Dade County Mortgage & Real Estate Co. has filed articles of incorporation; capital \$60,000; G. W. Moody, Pres.; J. J. Beach, V.-P.; John C. Gramling, Secy. & Treas.

Ga., Atlanta.—Mortgage Security Savings Bank has made application for charter; capital \$100,000; incorporators, James O. Wynn, Rolling H. Jones, W. L. Pomeroy and Arthur G. Powell.

Ga., Augusta.—National Security Co. has made application for charter; capital \$100,000; petitioners, Carl Boller and Allen W. Jones.

Ga., Hartwell.—Hart County Bank chartered; capital \$25,000; C. I. Kidd, Pres.; Julian B. McCurry, V.-P.; F. T. Kidd, Cashier; directors, W. E. McCurry, Myer Saul, Clayton Herndon, C. E. Matheson, W. B. Morris, L. H. Cobb of Hartwell, A. N. P. Brown, Canon, Ga., R. F. D.; J. I. Jenkins, Bowman, Ga., R. F. D.; M. T. Warren, Elberton, Ga., R. F. D.

Ga., Waycross.—The Waycross Savings & Trust Co. has amended its charter, changing its name to the State Bank & Trust Co.

Ga., Winder.—Winder Banking Co. has made application to convert into the Winder National Bank; capital \$100,000.

Ky., Louisville.—Greater Louisville Savings and Building Assn. has filed articles of incorporation; capital \$500,000; incorporators, Louis Summers, C. E. Boswell, N. C. Hall, J. B. Judah, Henry Fleischaker, Frank J. L. Morat, Gustav Flexner and others.

La., New Orleans.—Commercial Life & Accident Insurance Co., capital \$50,000, is organized with the following officers: Patrick J. Donegan, Pres.; E. J. Benson, V.-P.; Jack Panno, 2d V.-P.; R. J. Maniegra, Jr., Secy.; Eugene H. Daster, Treas.

La., Iberville.—Iberville Building and Loan Assn., capital \$2,000,000, is organized with the following officers: Dr. W. A. Holloway, Pres.; E. B. Schwimg, 1st V.-P.; Louis B. Le Blanc, 2d V.-P.; J. Ferdinand Hebert, Treas., and Julius A. Carville, Secy. and Atty.

Okla., Depew.—First National Bank of Depew has made application to organize; capital \$25,000. Directors: J. L. Flint, J. B. Charles, Lee Patrick and E. L. Conklin. This is to succeed the First State Bank of Depew.

S. C., Columbia.—Safety Building & Loan Co. is chartered; capital \$200,000; William Elliott, Pres.; G. M. Berry, V.-P., and J. W. R. Pope, Secy. and Treas.

S. C., Darlington.—Darlington Insurance & Investment Co. incorporated; capital \$10,000; petitioners, B. W. Wait, J. S. McInness and W. L. Wait. Business is to begin about Oct. 10.

S. C., Rock Hill.—Planters' Bank of Rock Hill will begin business Nov. 1; capital \$25,000, which will probably be increased to \$50,000. Incptrs.: Dr. M. H. Sanifer, N. M. McDill, T. M. Whisonant and David T. Outzils.

Tenn., Norene.—People's Bank of Henderson's Cross Roads, Wilson county, is chartered and will begin business about Nov. 1. Capital \$10,000. Incptrs.: O. W. Phillips, W. M. Litchford, H. C. Kent, Horace Thompson and J. W. Leeman. (Previously mentioned under Lebanon, Tenn.)

Tenn., Rockwood.—Rockwood State Bank is authorized to do business; capital \$10,000.

NEW SECURITIES

Ala., Phoenix.—\$16,000 5 per cent. 3-year water-works bonds have been purchased by J. F. Fuller & Co., Cleveland O.

[For Additional Financial News, See Page 64.]

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South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
JNO. B. RAMSAY, V.-P. and Chm. Bd. of
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JOHN B. H. DUNN, Cashier.
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Surplus and Profits \$2,175,000.
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WM. G. TAYLOR, Vice-Pres. and Treasurer.
HARRY W. DAVIS, Vice-Pres. and Secretary.
W. W. PUSEY, 2d Title and Real Estate Officer.

The National Exchange Bank

OF BALTIMORE, MD.
Hopkins Place, German and Liberty Sts.
Capital, \$1,500,000.

March 30, 1915, Surplus and Profits,
\$850,000.00.

OFFICERS:

WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corpora-
tions, Banks, Bankers and Indi-
viduals Invited.

The First National Bank
OF KEY WEST, FLA.

United States Depository and Disbursing
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Capital - - - - - \$100,000
Surplus and Undivided Profits - 40,000
A general banking business transacted.
Special attention given to collections.

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RICHMOND, VIRGINIA

Capital and Surplus - - - - - \$3,000,000

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JNO. M. MILLER, JR., Vice-Pres.
W. M. ADDISON, Cashier.

JOHN NUVEEN & CO.

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ATLANTA—Mr. L. C. Matthews, Manager

And an Office at
DENVER—Mr. C. H. Banks, Manager

Ala., Scottsboro.—Water-works bonds are voted. Address The Mayor.

Ark., Argenta.—Water-works Improvement Dist. No. 1 has been created and \$500,000 of bonds for purchasing plant and pipe line of Arkansas Water Co. are to be issued. Address The Mayor.

Ark., Leslie.—\$28,000 water-works bonds have been purchased by Craven & Pierce of Little Rock at 97½.

Ark., Marion.—Dispatch to Manufacturers Record says \$160,000 6 per cent. 1-20-year bonds Drainage Dist. No. 6, Crittenden county, have been sold to Smith, Moore & Co., St. Louis, at 99 and accrued interest.

Ark., St. Francis.—St. Francis Levee Board has voted \$100,000 in scrip for strengthening levees.

Fla., Arcadia.—Bids will be received until Oct. 1 for \$350,000 6 per cent. 20-30-year De Soto county road bonds. Address D. L. Skipper, Road Commr.

Fla., Clearwater.—Election held Aug. 18, when \$715,000 5 per cent. 15-30-year Pinellas county road bonds were voted, has been declared void, owing to insufficient advertising, and another election will be ordered at a meeting of the County Commrs. Oct. 5. C. W. Wiering is Clerk Board County Commrs.

Fla., De Land.—The election to vote on \$250,000 of road bonds Commrs. Dist. No. 5, Volusia county, will be held Oct. 12. S. D. Jordan is Clerk Circuit Court.

Fla., De Land.—Bids will be received until 10 A. M. Oct. 15 by Geo. F. Crouch, Chrmn. Board Public Instruction, for \$50,000 6 per cent. bonds School Dist. No. 4, dated July 1, 1915, and maturing 1925 to 1945, inclusive.

Fla., Jacksonville.—\$300,000 5 per cent. Duval county bonds for paying off floating indebtedness have been voted. E. A. Ricker is Chrmn. Board County Commrs.

Fla., Largo.—\$120,000 6 per cent. \$1000 denomination bonds are being offered by Board of Supervisors of Lake Largo-Cross Bayou Drainage Dist., F. R. Francke, Prest. Further particulars will be found in the advertising columns.

Fla., Miami.—\$360,000 ship-channel construction, \$40,000 local railway, \$50,000 sanitary sewer, \$175,000 bridge and \$30,000 hospital bonds are voted. J. W. Watson is Mayor and W. B. Moore, City Clerk.

Fla., St. Andrews.—\$24,000 5 per cent. street and improvement bonds are voted and will soon be offered for sale. Address The Mayor.

Fla., Tallahassee.—\$200,000 5 per cent. 30-year \$1000 denomination Leon county road-improvement bonds are voted. Date for opening bids not yet decided. O. C. Van Brunt is County Clerk.

Fla., Titusville.—Bids will be received until 2 P. M. Oct. 4 by S. A. Osteen, Chrmn. Board County Commrs., for \$150,000 6 per cent. \$1000 denomination bonds Special Road and Bridge Dist. No. 3, Brevard county.

Ga., Atlanta.—Election called for Sept. 30 to vote on \$1,000,000 school, \$750,000 water-works, \$133,000 fire department, \$1,000,000 sewer and disposal plant, \$100,000 cyclorama building and \$375,000 Grady Hospital bonds is postponed until some time next spring. Address Mayor Woodward.

Ga., Canon.—School bonds are voted. Address The Mayor.

Ga., East Point.—\$30,000 5 per cent. 1-30-year school bonds have been purchased by J. H. Hilsman & Co., Atlanta.

Ga., Monroe.—\$19,400 bonds Jack's Creek Drainage Dist. recently purchased at par by Walton county parties are 8 per cent.; denomination \$100; dated July 1, 1914. W. L. Wood is Chrmn. of Board.

Ga., Rome.—\$5000 10-year West Rome School Dist., Floyd county, bonds are to be issued. Address Board of Trustees.

Ga., Savannah.—\$400,000 permanent school fund, \$375,000 road to Tybee, \$75,000 home for juveniles and farm building, and \$50,000 courthouse improvement 4½ per cent. 30-year Chatham county bonds are voted. Oliver T. Bacon is Chrmn. County Commrs.

Ky., Crittenden.—Election Sept. 30 to vote on road-improvement bonds. Address Board Town Trustees.

Ky., Georgetown.—Election is to be held in November to vote on \$90,000 school bonds. Address The Mayor.

Ky., Somerset.—Election is to be held in Pulaski county Dec. 18 to vote on \$300,000 road bonds. Address County Commrs.

La., Donaldsonville.—Election is to be held in Ascension parish Oct. 19 to vote on \$15,000 Dist. No. 2 and \$50,000 Dist. No. 1 road bonds. Address Police Jury.

La., Lafayette.—Lafayette Parish Drainage Dist. No. 1 has for sale an issue of bonds. Address L. L. Judice, Secy., Scott, La.

La., Lake Charles.—\$9000 5 per cent. \$500 denomination Vinton Drainage Dist. bonds are to be issued. Address Board of Commrs.

Miss., Louisville.—Issue of \$12,000 funding bonds is authorized by Board of Aldermen.

Miss., Philadelphia.—\$30,000 water-works and sewer bonds are being offered. J. M. Irving is City Clerk.

Miss., Ripley.—Bids are being received by H. R. Spight, City Clerk, for \$13,000 6 per cent. school bonds.

Mo., Hillsboro.—Election is to be called in Jefferson county to vote on \$50,000 road and bridge and \$25,000 county hospital bonds. Address County Commrs.

Mo., Maryville.—\$35,000 Nodaway township road-improvement bonds, Nodaway county, for which bids are asked until 1.30 P. M. Oct. 4, are dated Nov. 1, 1915, maturing May 1, 1917 to 1931, inclusive; interest not to exceed 6 per cent. Fred J. Yeomans is County Clerk.

Mo., St. Joseph.—\$100,000 4½ per cent. \$1000 denomination school district bonds were purchased Sept. 18 by Hoehler, Cummings & Prudden, Toledo, O., at \$101.180.

Mo., St. Joseph.—\$125,000 street repair, \$75,000 light-plant extension, \$10,000 street-flushing equipment, \$15,000 garbage-disposal plant, \$12,000 asphalt-repair plant, \$75,000 park, \$25,000 city workhouse, \$550,000 sewer extension, \$25,000 emergency hospital, \$86,000 fire department and \$50,000 Brookdale flood reservoir bonds defeated.

N. C., Asheville.—Election is to be held in Buncombe county to vote on \$10,000 Craggy School Dist. bonds. Address County Commissioners.

N. C., Cherryville.—\$20,000 6 per cent. 30-year school bonds have been purchased at par by the Citizens' National Bank of Gastonia.

N. C., Hillsboro.—Chapel Hill and Bingham townships, Orange county, railroad-aid bonds will be purchased by Orange Railway & Electric Co. W. M. Durham is Clerk Board Commrs. Orange County.

N. C., Salisbury.—Date for receiving bids for \$200,000 5 per cent. 40-year \$1000 denomination water, school, street and sewer bonds is postponed from Oct. 1 until noon Oct. 16. Walter H. Woodson is Mayor and T. H. Vandeford, Jr., City Atty. Further particulars will be found in the advertising columns.

N. C., Wilson.—\$75,000 gas and \$95,000 water 5 per cent. bonds have been purchased by Baker, Watts & Co., Baltimore. A report says that the bonds were sold at par.

N. C., Zebulon.—Question of issuing \$3000 electric-light and \$2000 street 6 per cent.

bonds is under consideration. Address The Mayor.

Okla., Ardmore.—\$6000 funding bonds will probably be issued. Address The Mayor.

Okla., Cushing.—\$30,000 sewer bonds are voted. Address The Mayor.

S. C., Calhoun.—Calhoun School Dist. has sold \$20,000 school-building bonds. Wm. H. Grant is Secy. Board of Education.

Tenn., Benton.—Election to vote on \$10,000 water-works bonds will be held Oct. 30. Address B. C. Witt.

Tenn., Henderson.—Bids will be received until noon Oct. 19 by E. M. Braden, City Recorder, for the following 6 per cent. bonds, dated Sept. 1, 1915: Water-works, \$20,000; electric light, \$12,000; sewer, \$14,000; denomination \$500.

Tenn., Johnson City.—Despite contrary reports, date of sale of \$37,500 courthouse and \$25,000 market-house-bond issues has not been fixed. Bond ordinances will be passed Oct. 5. Sale will be at least 30 days beyond that. W. R. Poudier, City Treas. (Previously mentioned.)

Tenn., Lonsdale, P. O. Knoxville.—Election to vote on street and school bonds will be held Oct. 30. Amount has been raised from \$15,000 to \$30,000. H. E. Christenberry is Mayor.

Tenn., Memphis.—\$160,000 6 per cent. \$500 and \$1000 denomination bonds Drainage Dist. No. 6, Crittenden county, have been purchased at 99 and accrued interest by Smith, Moore & Co., St. Louis, Mo.

Tenn., Pulaski.—Road bonds will probably be issued by Giles county. Address County Commrs.

Tenn., Rogersville.—Bids will be received until noon Oct. 2 by I. E. Shanks, Secy. Bd. Trustees Hawkins County, for \$250,000 5 per cent. road bonds.

Tex., Austin.—The Attorney-General has approved the following securities: \$800 5 per cent. 10-20-year bonds Dist. No. 28, Houston county; \$150,000 5 per cent. 10-40-year bonds Justice Precinct No. 8, Kaufman county; \$5000 Rusk water-works bonds; \$500,000 5 per cent. 20-year El Paso series No. 10 school-house bonds; \$1500 Grimes County Common School Dist. 30, 1-20-year 5 per cent. bonds; \$1600 5 per cent. 20-year bonds Collingsworth County Common School Dist. No. 9; \$800 School Dist. No. 60, 5-20-year, and \$4200 Dist. No. 27, 5-40-year 5 per cent. school bonds, Henderson county; \$1000 Dist. No. 24 and \$500 10-year Dist. No. 52, 5 per cent., Eastland county school bonds.

Tex., Batesville.—Election is to be ordered to vote on road bonds. Address Commrs. Court, Zavalla county.

Tex., Dallas.—Bids will be received until 10 A. M. Oct. 30 for \$135,000 10-40-year \$1000 denomination viaduct and bridge bonds; dated Aug. 10, 1915; maturity Aug. 10, 1955. Chas. E. Gross is County Auditor.

Tex., Donna.—\$750,000 5 per cent. 40-year \$1000 denomination bonds Donna Irrigation Dist., Hidalgo county, are voted. Of the amount \$425,000 will be offered now. Date for opening bids not yet decided. G. B. Meriwether is Prest. and D. H. Barr Secy. of Dist.

Tex., Fairfield.—Election is to be held in Freestone county to vote on \$120,000 road bonds. Address County Commrs.

Tex., Fort Worth.—The \$35,000 Diamond Hill Dist. school-building bonds soon to be placed on the market are 40-year 5 per cents. Address Dan E. Lydick.

Tex., Liberty.—\$200,000 Cleveland precinct, Liberty county, road bonds defeated.

Tex., Liberty.—Raywood Drainage Dist. No. 2, Liberty county, contemplates issuing bonds to construct drainage system. Address Board of Commrs.

Tex., Lonview.—\$392 5 per cent. 20-40-year bonds have been purchased by J. L. Arlitt, Austin.

Tex., Llano.—\$34,000 5 per cent. 5-40-year Llano county bridge bonds are voted; dated Oct. 10, 1915; denomination \$1000. Of the amount \$24,000 will be offered at private sale as soon as approved by the Attorney-General. Louis H. Bruhl is County Judge. (Previously mentioned.)

Tex., Lubbock.—The \$100,000 courthouse bonds recently voted are 40-year 5 per cents; denomination \$1000. Address County Commrs.

Tex., Marble Falls.—Election is to be held Oct. 5 to vote on \$3000 5 per cent. 5-30-year incinerator bonds. R. E. Johnson is Mayor; T. M. Jay and E. T. Nanney, Commrs.

Tex., Marlin.—\$120,000 school bonds which were to be placed on the market have not been approved by Attorney-General. W. F. Goode is County Clerk. (Previously mentioned.)

Tex., Marshall.—\$300,000 Harrison county road bonds were recently voted. Address County Commrs.

Tex., Port Lavaca.—Question of issuing water-works bonds is being agitated. Address The Mayor.

Tex., Sinton.—\$75,000 6 per cent. 40-year \$1000 denomination bonds Road Dist. No. 3, San Patricio county, have been purchased at par, accrued interest, plus premium of \$37.50, by J. C. Mayer & Co., Cincinnati; dated July 9, 1915; maturity July 9, 1955. Reports stated the bonds were purchased by E. G. Hodge, Cashr. Angleton State Bank.

Tex., Victoria.—\$190,000 Dist. No. 3 and \$14,000 Dist. No. 2 drainage bonds, Victoria county, are to be issued. Address County Commrs.

Tex., Waco.—\$75,000 sewage-disposal plant, \$15,000 sewer extension and \$10,000 bridge bonds to be voted on Oct. 19 are 30-year 5 per cents, dated July 1, 1915; denomination \$1000. J. W. Higgins is Mayor.

Tex., West.—\$12,500 5 per cent. 40-year sewer bonds have been sold. Address Mayor Ingraham.

Va., Accomac.—\$30,000 5½ per cent. 5-30-year Accomac county road-improvement bonds have been purchased by D. J. Wheaton, Salisbury, N. C., at 100.25.

W. Va., Adamston.—Bids will be received until noon Oct. 16 by W. V. Hutchinson, Town Recorder, for \$21,000 6 per cent. 10-year paving bonds.

W. Va., Buckhannon.—Election is to be held in Upshur county Dec. 30 to vote on \$250,000 road bonds. Address County Commrs.

W. Va., Charleston.—Ordinances have been introduced in the City Council authorizing issue of \$20,000 for purchase of additional ground for Spring Hill Cemetery and \$30,000 for purchase of mausoleum. Address The Mayor.

W. Va., Keyser.—\$35,000 6 per cent. 10-34-year \$500 denomination school district bonds have been purchased at \$1950 premium and accrued interest by Seasongood & Mayer, Cincinnati, O. Dated July 1, 1915.

W. Va., Morganton.—Morgan Dist., Monongalia county, has voted to issue \$300,000 road bonds. Address County Commrs.

W. Va., Piedmont.—\$85,000 refunding, sewer and paving bonds defeated.

FINANCIAL NOTES

The Bank of Clearwater at Clearwater, Fla., has decided to increase its capital stock from \$50,000 to \$150,000 and to erect a new bank building to cost about \$35,000. D. F. Conoley is Prest. and H. W. Birns, Cashr.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

An Up-to-Date Method of Handling Building Material.

For years the humble hodcarrier and wheelbarrow pusher have been indispensable on the payroll of the building contractors. Concerns in this line of work have always given interested attention to ways and means for eliminating as far as possible the human equation in moving materials, realizing that mechanical means, wherever applied, meant increased speed and reduced labor cost. Labor-saving conveying appliances have been developed and perfected during recent years to a point where general attention has been centered upon their practicability and general advantages. Chief among these are the gravity conveying devices that operate without the necessity of providing power.

Material-handling problems of contractors as well as others who have carload quantities of materials to move are said to have been greatly simplified by the introduction of the gravity roller conveyors developed by the Mathews Gravity Carrier Co., manufacturer of gravity carriers, conveyors, spirals, chutes and automatic elevators, Ellwood City, Pa. The gravity conveyor offers a simple, inexpensive, speedy and flexible method for moving brick, tile, building blocks, cement, etc., between cars and storage quarters or between any other two points which could be connected with a line of gravity conveyor units established on a slight down grade between loading and discharge points.

While a great many dealers, jobbers and manufacturers have adopted this method of material conveyance, it remained for the Aberthaw Construction Co. of Boston, Mass., to utilize fully the all-around advantages of gravity rollers in connection with large construction work. The accompanying illustrations show this company's equipment of Mathews roller conveyors in actual use at Ansonia, Conn., where it is erecting a large manufacturing building for the Farrell Foundry & Machine Co.

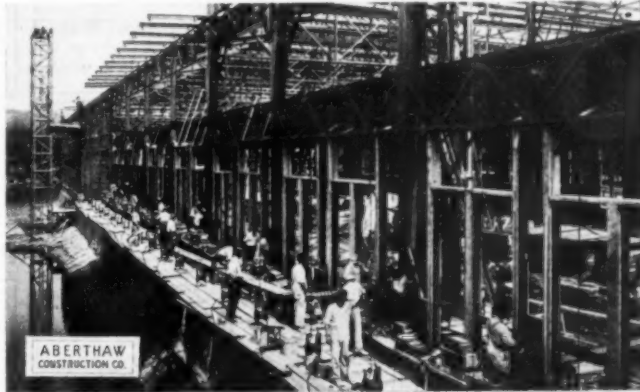
Mathews roller conveyors consist of steel ball-bearing rollers assembled in steel frames, made up in standard portable units four and eight feet in length. Curves of any degree or angle are provided, making it possible to direct the delivery of material in any desired direction. A study of the illustrations will reveal how conveniently these roller units can be employed to distribute brick, cement, mortar, etc., to various points from cars, doing away with hodcarriers and wheelers. The cement is conveyed direct from the car to the stock pile, adjacent to the mixing machine. The brick are conveyed either to the stock pile or direct to the hoists, and from the hoists to the masons. The mortar is conveyed from the mixing machine to the hoists, and from there to masons.

Ordinarily, 50 per cent. of the time consumed by hodcarriers and wheelers in returning for a load is absolute waste, but the gravity conveyor provides a roller runway between the points where the material originates, either cars or storage, to where it is wanted for construction work, and it is a simple process to put the material on at one end and take it off at the

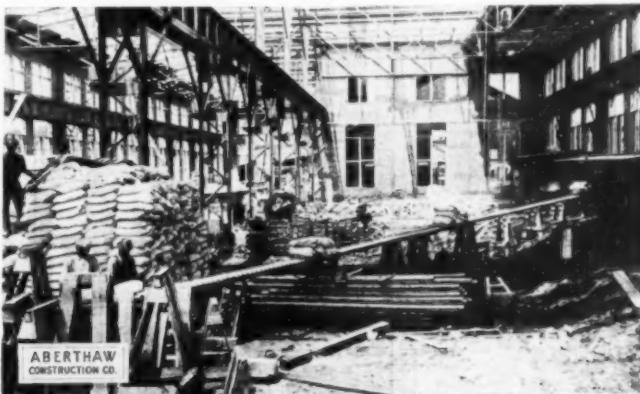
other, with no interruption in the steady stream between the two points. Advantages of the gravity method of handling appeal strongly to men who have been in contact with the problem of handling building materials quickly and at small cost. In most instances speed of handling is the main consideration, and this is claimed to be where the roller conveyor demonstrates its greatest value to the contractor on rush contracts.

New Combination Boom Thew Shovel.

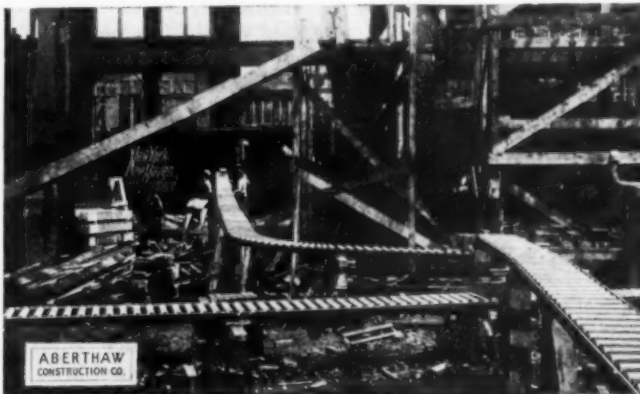
The Thew Automatic Shovel Co., Lorain, O., which has been responsible for many advanced ideas in steel shovel construction, has just placed a new machine on the market known as the Thew combination boom shovel.



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GRAVITY CONVEYORS RUNNING FROM CARS TO CONNECTING DISTRIBUTING LINES.

In this new machine the Thew horizontal crowding motion, said to be an exclusive feature of Thew shovels for more than 15 years, is combined with shipper shaft mechanism of new design. Thus in this new machine is afforded the proven economy of the horizontal crowd for shallow cuts, removal of concrete and macadam and general excavating work, together with a jack shaft crowding motion which is ideal for sewer-trench work or other contracts where extended dumping radius or high clearance lift is desired.

The two crowding mechanisms are independent and non-interfering. Both are operated from the same crowding engine, which is simply changed in position. When using the horizontal crowd the long dipper handle must be removed, and when the shipper shaft crowd



TYPE O, THEW COMBINATION BOOM STEAM SHOVEL, SHOWING SHIPPER SHAFT REMOVED AND HORIZONTAL CROWDING MOTION IN USE.

is in use the short dipper arm is chained to the boom structure after removing the dipper. All changes necessary are said to be made in less than three hours. The same dipper can be used with either crowding mechanism, but a special sewer-trench dipper will be furnished if desired.

The trussed and reinforced boom of the Thew shovel and the manner in which it is attached to the turntable by wide hinge castings provide unusual strength and rigidity, and naturally add to the operating efficiency and durability of the machine.

The long dipper handle used in connection with the jack shaft crowding mechanism combines lightness and strength. It is made of a single piece of wood, eight inches square, armored with steel plates and equipped on the under side with steel racks. These dipper arms can be had in numerous lengths to suit requirements of different kinds of work, depending upon the depth of trench, extent of dumping radius or height of clearance lift desired. A dipper with a 27-foot stick is calculated to dig a trench 16 feet below the ground on which the shovel stands and dump material in a radius of 31 feet and with a clearance of 14 feet. A single dipper stick, which is of light, simple construction, is used in connection with the design of the Thew boom, affording a combination of unusual strength and effectiveness. When the dipper is lowered into a trench the dipper stick passes down between the side members or dipper arm guides of the combination boom, thus distributing any side thrust or undue strain encountered. It is obvious that this construction affords a maximum of strength for this lateral strain.

With the combination boom Thew shovel the contractor can handle any kind of work encountered. It is of particular interest also because the contractor can have either kind of crowding motion incorporated when the machine is purchased, and the other mechanism can be purchased and added at a later date when the occasion requires. The company states a number of these machines have been in use for several months and they



TYPE O, THEW COMBINATION BOOM SHOVEL, SHOWING IMPROVED SHIPPER SHAFT MECHANISM IN USE.

have performed their work satisfactorily under the most trying conditions. Literature describing the shovel is now being prepared, and will be sent to anyone interested who will address the Thew Automatic Shovel Co., Lorain, O., and make their wishes known.

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CONVERSE COLLEGE

SPARTANBURG, S. C.

is one of the only six women's colleges in the South honored by membership as a standard college in "The Association of Colleges and Preparatory Schools of the Southern States." Its B. A. degree is accepted by the highest grade Colleges and Universities and admits, without further work, to candidacy for the M. A. degree. It has separate science, music, and library buildings; dormitories limited to 190; gymnasium and infirmary; 42-acre campus; and 38 teachers and officers. It is thirty-five miles from the Blue Ridge mountains, and has an ideal winter climate. It owes no debts, and has an endowment. It is accessible North, East, South, and West by six lines of railway. If you wish a catalogue, address

ROB'T P. PELL, Litt. D., President

Spartanburg, S. C.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Has Contracts for Three School Buildings.

Among recent building contracts secured by B. MacKenzie, heating and ventilating engineer and contractor, 216 W. Market St., Greensboro, N. C., are two school buildings in Greensboro, and also contract for the erection of the Caswell Training School at Kinston, N. C.

Standard Capacity Rating Adopted for Concrete Mixers.

In order to provide for a uniform rating of capacities of batch concrete mixers, the National Association of Mixer Manufacturers, at their August meeting, adopted a resolution providing that the members of the association in their future catalogues and circulars shall specify the capacity of their mixers as "size of wet, mixed batch," and not otherwise. The resolution further provided that the dry, unmixed capacity of a mixer may be approximated as one and one-half times the wet mixed batch, assuming the use of cement, sand and 1½ inch crushed stone with 1½ gallons of water per cubic foot of mixed concrete. It is felt that this decision will be beneficial to contractors and everyone connected with the concrete and cement industries, because it will enable them to arrive at a real comparison between mixers, both in price and in capacity.

Further Westinghouse Panama-Pacific Prizes.

Important among the large number of awards received at the Panama-Pacific International Exposition by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., are the following: The highest possible award, the Grand Prize, on the 4000-horse-power 650-volt direct-current double-unit Pennsylvania electric locomotive. The medal of honor on alternating-current and direct-current industrial motors and control apparatus, on precision instruments, on Le Blanc condensers, on motor-generator sets for moving-picture machines and on high-voltage oil switches. The gold medal on a number of different classes of apparatus, among which are steam turbines; alternating and direct-current generators; alternating current and direct-current railway motors; transformers; rectifiers; starting, lighting and ignition systems; switchboards and accessories, and mining locomotives. The Westinghouse Electric & Manufacturing Co. was also awarded the gold medal for the most complete and attractive installation in the Palace of Transportation, and a number of silver medals and bronze medals were also received.

Newman's Lacquer for Brass.

The Newman Lacquer Co., 3317 Hackberry St., Cincinnati, O., is marketing a transparent liquid preparation which, after it is applied with a brush, on the order of varnish, to brass poster frames, encsels, railings, etc., is claimed to dry and become hard within an hour's time after application. The object of this lacquer is to save the necessity of polishing the metal, as it is made to preserve the metal in a bright and lasting luster for about six months. After it begins to show a little wear the old lacquer can be easily removed with wood alcohol, and the brass can again be polished as before, or another coat of lacquer can be applied. Mr. J. S. Newman, who is connected with this firm, and who is also secretary and treasurer of the Newman Manufacturing Co., manufacturer of brass lobby frames and theater fixtures, Cincinnati, advises that this lacquer is now being used by a great many theaters throughout the country, giving excellent satisfaction. It is put up in half-pint, pint, quart and gallon cans. Literature will be mailed upon request to the company.

Refrigerating Engineering.

"Architects, electrical engineers, civil engineers or consulting engineers for power plants are consulted even for installations of minor importance," says M. R. Carpenter, consulting refrigerating engineer, Cincinnati, O., "while more often than not equipment of refrigerating and ice-making

machinery, costing thousands of dollars, are installed without the aid or direction of engineers having experience in that particular line, or, if they are in charge at all, it is usually as the paid employee of the firm furnishing the equipment. The term refrigerating engineer is perhaps of all the lines of engineering work commonly practiced the least known to the general public, and even to most owners and managers of refrigerating and ice-making machinery the term does not always convey its full meaning. The principles and laws applying to refrigerating work are comparatively simple and easily mastered by anyone with sufficient education to understand them, but the successful application of these laws is another matter and cannot be taught in the laboratory or learned from textbooks, though the lessons from both are essential in order to enable one to become a capable refrigerating engineer. There are many plants today which, if not running at a distinct loss, are at least inefficient, which were designed and installed by parties having one or the other of the necessary attributes, but not both, and also many plants where the first cost has been excessive and most likely the results a failure for the same reason. In the last few years a number of experienced refrigerating engineers have realized the great need for their services and the opportunities presented, and have placed themselves in a position to meet this demand. Mr. Carpenter states he is a pioneer in refrigerating engineering work, having both the theoretical knowledge and 20 years of hard, practical experience, covering selling, draughting, designing, erecting, operating, testing, etc., with facilities to enable him to successfully meet all the various problems presented while carrying on this line of work. In summing up the advantages obtained from the employment of a capable refrigerating engineer, Mr. Carpenter says that the services of such an engineer is not an item of expense, but an investment, and one that will in almost all cases pay itself off, if not in saving the first cost of equipment, then in saving in cost of operation for a short time.

TRADE LITERATURE

Patented Hank Clock Indicator.

A recently-issued illustrated pamphlet of the Saco-Lowell Shops, Boston, Mass., manufacturers of textile machinery, is devoted exclusively to the latest design of hank clocks they manufacture for their frames; also for various other makes of drawing, roving, spinning and twistings. The pamphlet comments on the machine as follows: "These clocks have been designed to allow us to furnish clocks which are tamper-proof and simple and desirable. Extra hanks cannot be run off of these clocks without their being taken off of the frames and broken; and even then the construction is such that the work of turning the clock would be as tedious as to make it not worth while. We strongly recommend them as a means for obtaining accurate records of production and knowledge of costs. We shall be glad to take up in detail any desired application of these clocks."

Merits of Wood Block Pavements.

General discussions on creosoted wood-block pavements and the opinions of civil engineers, paving experts, street commissioners and citizens' leagues with comments by the United States Government have been compiled and published in book form by the Southern Pine Association, New Orleans, La., the members of which are producers of Southern yellow pine from which it is claimed the best wood-block paving is made. Durability, maintenance, cleanliness, smoothness and silence are among the qualities discussed and said to be embodied in creosoted wood-block pavements. In the book are given many illustrations of the extensive use of wood-block-paved streets, including views of principal thoroughfares in London, Paris, New York, Boston, Chicago, Detroit, Cincinnati, St. Paul and the Southern cities of Washington, Atlanta, St. Louis, Kansas City, Joplin and Dallas.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Miscellaneous Manufactures Wanted.

N. V. L. E. Tels & Co.'s, Suikerstraat Wijk F., Soerabaja, Java:

"Enclosed we hand you a list of articles made in the United States and which we handle. Induce makers of any of these to write and make offers. Offers should be accompanied by illustrations, and, if possible, samples and lowest quotations and best discounts for cash. We pay cash against demand draft D./P., or, if desired, can arrange credit with New York bank. It is difficult and involves trouble to introduce new makes in this market. In order to get the benefit of this trouble afterwards, we should like the monopoly of sole agency for our territory, being Java and Padang, where we have our branches, and shall take special interest in proposals. Offers should be sent without delay, and, if possible, with c. i. f. Java prices, or if not possible, with such information about freight, etc., which may enable us to calculate the c. i. f. prices of delivery required and minimum quantities to order. If we have to write first and inquire again about details, or if our orders have to be referred back, this will mean a loss of time of about four months, and when the war is over and we shall be able to buy at the old sources again it may no more be worth our while to go to the trouble to introduce new makes, whereas business may continue if the new makes have been introduced." (List mentioned is on file with MANUFACTURERS RECORD, and names various miscellaneous products in regular demand. It includes metal work, hardware, chemicals, cotton cloth, clothing, bicycles, sewing machines, shoes, decorated tin boxes, chinaware, copper, enamels, hosiery, bar iron, plain and corrugated galvanized sheets, vehicle lamps, leather for various kinds of manufacturing, paints, fountain pens, polishes, razors, saddlery, shovels, toys, watches, wire cloth, barbed wire, sporting goods, etc.)

Drugs, Glass, Medical Syringes, Etc.

Jacinto Duarry Serra, commission merchants, Mal-lorca 241, Barcelona, Spain:

"I have never engaged in handling machinery; always preferred to deal extensively in pharmaceutical products, drugs, perfumery. I would not reject any reasonable offer under suitable conditions to act as an agent for goods in this line. I am interested in neutral glass. I would thank you to put me in communication with manufacturers of neutral glass tubing for making ampules for medicines to be injected hypodermically; I received them formerly from Jenna. I am greatly interested in getting machinery for making ampules for hypodermic injections, objects of glass in general, for perfecting glass for syringes and for mounting electrical pumps. I would like also to know the sellers of the material of which they are composed."

(The electrical are called bombillas, and are probably some small apparatus, partly made of India rubber, used for medical purposes.)

France Wants Chemical Products.

Paquet & Toutan, 57 Rue Des Archives, Paris, France:

"We are at the disposal of manufacturers or exporters of chemicals, raw material and kindred articles likely to find a market in France. We have been engaged in this trade for 20 years, and are well introduced among principal buyers and consumers. On account of the war that closed the main source of supply (Germany) we think there is a chance to do business in many items. If we could find a good source of supply of carbonate barytes, soda and potash bichromates, potash, we feel confident we could easily sell large quantities. But this may have only temporary interest. It would be more interesting to find out which articles could be supplied

with advantage by the States when the war is over. If your manufacturers are not ready to start now, we think it cannot do any harm to look into the matter and see what the chances of business are. We are ready to give all information needed to lead to connections mutually profitable. We usually deal on a commission basis, but during the war for some special items we could perhaps be induced to alter this to a certain extent. We have a warehouse where we have been carrying stocks for our manufacturers."

For United States Products.

The American Commissions Office, Rafael Favon and Alfred Roi, Calle Buenos Aires 585, Montevideo, Uruguay:

"I have recently established, in connection with Alfredo Rodo, the American Commissions Office. We intend to dedicate that business with preference to the collection and sales of articles and products manufactured in the United States of America. We will communicate with such firms whose names you may give us directly, as well as such as we find in the advertising columns of your paper. In case it is desired, we shall furnish concrete and pertinent information as to our business, and we shall take advantage of your good offer, which is as acceptable as it is opportune."

For Trade in France.

J. Massignon, 24 Rue de l'Epinette, Saint-Mande (Seine), France:

"There is no doubt whatever that many of the goods manufactured in your country can find a ready sale in France. If any of your manufacturers decide to look for an outlet in France for their goods, give them my address and they can give me full details as to the kind of goods they would like to place here. I would give what they say careful study and let them know what can be done in the way of selling the goods under the most advantageous conditions."

Bookbinding Equipment, Clothing, Etc.

Pablo Gutierrez Q., Cochabamba, Bolivia:

"The number of your review pleased me very much, and I have given it due attention. Continue to send it for one year. The amount for subscription I will remit as you may direct. The products in which we are principally interested are: Clothing in general; cotton goods, white goods in general; equipments for bookbinding and embossing; packages used for filling vacant space on ships. We are particularly interested in clothing. We would also like to act as agents for suitable people in this city."

Want Sewing Thread.

Bensussan, Sides & Co., Salonique, Greece:

"Get some of your large and important American manufacturers to communicate with us directly, with estimates and samples of their goods; that is, sewing thread on spools and in balls of various weights to be delivered at Salonique, cost, insurance and freight prepaid and the risks of war also to be insured against. No charge for packing; payment will be made in cash, with a discount of 5 per cent. as soon as the credit is established and confirmed by the usual document."

Lathes, Agricultural Implements, Etc.

A. Hayem Fils Aine, 16 Rue Bouteaux-Dumas, Neuilly, sur Seine, France:

"I shall, as soon as the war is over, take up the matter of acting as agent for American firms, such as are engaged in making equipments and machinery for public works, agricultural implements, etc. As I am not well acquainted with the English language, do me the favor to write in French, if possible. I am looking for a manufacturer of different kinds of lathes."

TEXTILES

Mt. Vernon-Woodberry Mills.

The Mt. Vernon-Woodberry Cotton Duck Co., Baltimore, has completed its reorganization, its successor being the Mt. Vernon-Woodberry Mills. This reorganization has been arranged in accordance with the plan heretofore detailed. The bondholders' committee issued the following statement of the company's earnings under its control:

Net income, from April 4, 1914, to January 2, 1915.....	\$13,787 73
From January 3 to January 30, 1915.....	56,505 24
From January 31 to February 27, 1915.....	27,071 24
From February 28 to April 3, 1915.....	40,505 77
From April 4 to May 1, 1915.....	36,192 32
From May 2 to May 29, 1915.....	36,677 30
From May 29 to June 30, 1915.....	60,232 82
Total.....	\$271,062 42
Deduct: Reserve for depreciation, six months, January 1 to June 30, 1915....	75,000 00
Balance.....	\$196,062 42

Pursuant to the terms of the reorganization plan a voting trust has been created with Waldo Newcomer, John J. Nelligan, George Cator, A. H. S. Post and Edwin G. Baetjer, all of Baltimore, as voting trustees. The term of the trust is for five years, from August 1, 1915. Under the organization plan each depositor is entitled to receive for each first mortgage 5 per cent. bond for \$1000 deposited voting trust certificates for \$700 par value (7 shares) of preferred stock, \$325 par value (3.25 shares) common stock.

For Manufacturing Woolen Blankets.

Organization has been effected by the Philippi (W. Va.) Woolen Mills Co., previously mentioned as incorporated with \$25,000 capital stock. Woolen blankets will be manufactured, and the machinery, costing \$10,000, will include a 100-horse-power steam power plant. This equipment will be installed in a two-story 100x60-foot brick building the company will construct. John A. White, president; A. G. Jenkins, vice-president; Waitman D. Corder, secretary-treasurer.

Textile Notes.

Stonewall (Miss.) Cotton Mills will install 60 40-inch automatic looms in No. 2 mill.

Sterling Spinning Co., Louisville, Ky., will install additional machinery in its knitting yarn mill.

A. C. Lineberger, president of the Imperial Yarn Mills and three other cotton manufacturing companies at Belmont, N. C., will organize a \$200,000 company to build a cotton-yarn mill. Imperial Yarn Mill officials mentioned last week as to organize this company.

Falls Manufacturing Co., Granite Falls, N. C., has awarded contract to Elliott Building Co., Hickory, N. C., for constructing its 268x75-foot brick and concrete building, costing \$40,000. Equipment will include 5000 spindles, 250 horse-power steam plant, etc., costing \$80,000. Organization and plans of this new company were recently stated.

Wiscasset Mills Co. and Efrd Manufacturing Co., Albemarle, N. C., J. W. Cannon of Concord, president, are each reported as to build additional mills costing \$500,000. The Wiscasset plant now has 65,000 ring spindles, 16,000 twister spindles, 200 cards, etc., while the Efrd plant has 25,000 ring spindles, 500 twister spindles, 126 cards, etc. Mr. Cannon is not ready to make any announcement.

To Represent Manufacturers.

Tng. E. Macchi, 35 Via Mario Pagano, Milano, Italy:

"I think to come over in the course of few weeks to study your industries and remove, possibly, the existing difficulties in trading with my country. Meanwhile, I hope you will not forget my name in case you hear of some important firm desiring to have an agent in Italy or abroad."

Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

FOR SALE ON REASONABLE TERMS.

25,000 acres, Escambia county, Alabama, especially adapted for colonizing.

24,000 acres coal and timber lands, located west of Birmingham, Alabama.

14,000 acres, located Southern Alabama, especially desirable for agricultural purposes or colonizing.

10,000 acres, located north Baldwin county, Alabama, especially adapted for a ranch.

5000 acres, especially desirable for citrus-fruit growing, including a townsite located just across the bay from Mobile.

5000 acres of hardwood timber, located on the Alabama River not far from Mobile.

500 acres, suitable for factory sites and subdividing, in Mobile.

100,000,000 feet of hardwood timber, located in Central Alabama.

30,000,000 feet long-leaf yellow pine, Southern Alabama.

I own and control all of the above-described properties, and I also act as a broker, so that I am in a position to meet most any requirements in Southern acreage property. Address H. H. Wefel, Jr., Mobile, Ala.

ATTENTION—MINERAL LANDS.—Zinc, lead and coal acreage; location, coal, 60,000, Southern Illinois; zinc and lead, Missouri and Arkansas, 4000 acres; can show you ledges of the real product; located near R. R. Have the above propositions from first party. Takes money to talk; no hot air. Very cheap. S. J. Burkitt, Moweaqua, Ill.

HAVE YOU A VALUABLE PROPERTY FOR SALE? Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

UNDEVELOPED Mineral Lands—Tax titles—In Eastern Oklahoma; 10-acre tracts, \$10 per acre; \$10 cash, balance ten cents a day, payable monthly. J. T. J. Co., Maysville, Ark.

WE HAVE SOME LAND suitable for steam shovel work, also land for deep mining. Would lease or sell. Miller Bros., Mulberry, Kans.

BAUXITE

BAUXITE.—Am in control of considerable high-grade Bauxite and invite correspondence from interested parties. Edw. K. Large, 211 Candler Bldg., Atlanta, Ga.

IRON OF PYRITES PROPERTY

NOW is the opportune time to buy iron of pyrites property. Houston & Liggett, Lewisburg, Tenn., have it. Write them for full particulars.

STONE QUARRY

STONE QUARRY FOR SALE.—Party owning valuable stone quarry, located on railroad within ten miles of growing manufacturing city of 90,000 population, will sell same on reasonable terms, or will trade for other property. Quarry now in operation has a fine face of rock assaying from 93 to 98 per cent. pure lime. Ideal proposition for one who understands the business. Address R. T. Fant, Central Bank Building, Memphis, Tennessee.

TALC LAND

FOR SALE.—The finest hard white talc proposition in the South; right on railroad; immense quantity; vein over fifty feet wide; never been worked, but well developed; will bear closest investigation. Box B, Helen, Ga.

CLAY PROPERTY

41 ACRES FINE CLAY, for brick, tile, sewer pipe or vitrified brick; 30 feet deep; on railroad, near deep water navigation and 3 large cities. For sample and price write A. C. Buchanan, Chester, Va.

ZINC AND LEAD LANDS

FULLY EQUIPPED AND DEVELOPED ZINC MINES, North Arkansas field, now paying \$4000 month. Face of ore justifies building another mill. Income should double next few months. \$100,000 for fee if sold before another mill added. Fredricks, Springdale, Arkansas.

ZINC-LEAD ORE LANDS in Missouri district for sale or lease. W. G. Moore, Carthage, Mo.

FOR SALE.—3000 acres proven zinc land in Northwest Arkansas. Millions of tons of zinc ore are being mined in this section, and is selling as high as \$100 per ton. A fortune can be made in a short while on this proposition. Address Clarksville Trading Co., Clarksville, Ark.

MICA DEPOSITS

MICA.—For Mica and Rich Mica deposits address J. L. Mitchell, P. O. Box No. 4, Birmingham, Ala. I have the best quality, and plenty.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c. per line; 300 lines, 16c. per line; 500 lines or more, 15c. per line.

ROCK ASPHALT AND COAL LAND

KENTUCKY ROCK ASPHALT FOR SALE.—A tract of land containing valuable deposits of rock asphalt, estimated at more than 9,000,000 tons and 3,000,000 tons of merchantable coal. Water transportation allowing delivery to points on Ohio and Mississippi at minimum cost. Presents rare opportunity for a city or county to secure unexcelled street or road surfacing material at low cost. Address William J. Perry, Staunton, Virginia.

COAL LAND

FOR SALE.—1410 acres coal land; mine with 1100-foot slope, 200 tons daily capacity, being operated daily; good improvements and machinery; as good, if not best, coal in Southwestern field; no labor troubles; are owners and desire to sell direct; no commissions. Inspection any time; a bargain. Elmer J. Lundy, Mena, Arkansas.

2000 ACRES of Coal Lands for sale on bend of Kentucky River, the Big Elkhorn. Scum of coal six to nine feet thick. Also 2000 acres near head of Rockhouse Creek; same county; same coal; four to six feet. Address J. H. Frazier, Whitesburg, Ky.

COAL AND TIMBER LANDS

FOR SALE.—500 acres of coal and timber land on railroad, estimated 13,500,000 feet of timber and three veins, one being 7 feet, and joins the Wind Rock mines, now being worked; a bargain at the price. J. O. Leinart, P. O. Bldg., Clinton, Tenn.

FOR SALE.—Fifty thousand acres coal and timber lands in Kentucky. Coal runs from forty inches to seven feet; timber will average seven thousand feet per acre, most of which is hardwoods. Title good. Will take large block of stock in new company. For particulars address J. E. Leps, Agent, Keyser, W. Va.

TIMBER LAND

TIMBER AND TIMBER LANDS FOR SALE. 30,000 acres Virginia hardwood, 80% oak. Excellent opportunity for quick buyer. Estimated to contain 300,000,000 ft. Address "Engineer," 704 Union Bldg., Charleston, W. Va.

FOR SALE.—Two Florida yellow pine limits and turpentine producers for quick sale at a bargain. Will stand all investigations. L. N., Box 536, Buffalo, N. Y.

FOR SALE.—Several desirable pieces of timber at bargain prices. If you are in the market and want a money-maker, write George J. Philp, Box 42, Oil City, Pa.

FOR SALE.—To pay creditors, 37,500-acre block Florida timber land near Tampa. Details on application. The Michigan Trust Company, Receivers, Grand Rapids, Mich.

TIMBER

REAL TIMBER BARGAIN.—50,000,000 ft.; 70% N. C. pine, poplar and cypress, all original growth; on Southern R. R. in South Carolina. Liberal terms and low price. J. P. Mulherir (owner), Augusta, Ga.

FOR SALE.—In Madison County, Florida, about 57,000,000 feet of first-class pine and cypress. This is high-grade timber and the price is right. Investigate it. B. L., 4 West Peachtree St., Atlanta, Ga.

LUMBER

LUMBER.—We have 100,000 feet 4-4 No. 1 common quartered white oak; 100,000 ft. No. 2 common quartered white oak; 500,000 ft. No. 2 common plain red oak, and 650,000 ft. No. 2 common plain white oak. See Wilson & Co., Navarre Bldg., St. Louis, Mo.

FARM AND TIMBER LANDS

1382 ACRES of Valley Timber and Farm Land; will average 5000 ft. per acre; 1/4 to 2 1/2 miles railroad; good for farming after timber is cut. Price in fee, \$22.50. Address E. C. Shelton, Altamont, Tenn.

FOR SALE.—12,000 to 100,000 acres rich Florida land. Several large tracts timber. Farmers' Land Loan & Title Company, Albany, Ga.

WRITE FOR OUR new booklet containing Virginia farms, large and small, and timber investments. Virginian-Seaboard Realty Co., Albemarle, Va.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

ALABAMA

FOR SALE BY OWNER.—Home plantation of Ex-Governor Robt. M. Patton, containing over 500 acres, adjoining city limits of Florence; 400 acres in cultivation; running water. An ideal stock farm. For further information and prices address John D. Weeden, Florence, Ala.

DALLAS COUNTY PLANTATION FOR SALE.—1286 acres, 5 miles west of Selma, between two pike roads and in 1 mile of two railroads. Half is rich bottom land. Has good 4-room residence, large barn, overhanging well, orchard, and 20 tenant-houses. Price most reasonable. One-fourth cash, balance at 6 per cent. Cannot trade for any other property. Bowie Smith, Selma, Ala.

FLORIDA

FREE.—William L. Larkin's Booklet, "The Truth About Florida," with a six months' subscription to the Indian River Farmer. Fruit growers, truckers, general farmers, folks interested in Florida, send 25 cents to the Indian River Farmer, 66 Seminole Ave., Vero, Fla.

TEN THOUSAND ACRES best farm and truck land in Folk county, Florida; on railroad within five miles Lakeland. Price, ten dollars per acre. Address G. C. Rogan, 1 and 2 Deen-Bryant Bldg., Lakeland, Fla.

FLORIDA.—8000 acres cut-over land lying between Lake Crescent, Lake Louise and Lake George in Putnam and Volusia counties, traversed by main line of A. C. L. Railway; large portion especially adapted to orange and grapefruit culture; balance finest potato and general farming land; lands all around selling \$30 to \$100 per acre. My price, \$10 per acre in a body; terms. Correspondence solicited. Chas. A. Brown, Jr., 3831 Buckman Building, Jacksonville, Fla.

FLORIDA.—10,000 acres of cut-over lands within 15 miles of Jacksonville, entirely surrounded by established colonies and particularly well adapted for trucking and poultry farms. For sale as a whole at \$12.50 per acre; terms to right parties. I also represent timber tracts in different parts of the State to suit almost any requirement. For particulars write William Nussbaum, Jacksonville, Florida.

MANATEE COUNTY, FLORIDA, orange grove and truck farm, with flowing artesian well, having good 5-room house and barn; most desirably located, near good neighbors, schools and churches, and close to railroad station, with hard-surfaced roads to three towns. Address W. W. Carnes, Owner, Bradenton, Fla.

WE were the original Northern promoters of Florida land in a wholesale way, and still own and control 400,000 acres. Attractive prices and terms to responsible people; references exchanged. We can help you make money. Write us for our wholesale booklet. Thompson & Jackson, Toulon, Ill.

CHOICE citrus and truck lands for sale in the Manatee River section of Manatee County, Florida; also water fronts. Send for soil survey report and views. Manatee River Land Co., Inc., 101 1/2 Franklin St., Tampa, Fla.

GEORGIA

APPLE ORCHARD FOR SALE.—3000 eight and nine-year-old trees, choice fruit and absolutely the best orchard in the country. Always hits. Only half mile from courthouse and railroad station. \$5500 buys it, one-third cash, balance two, three and four years. F. G. Jones, Cleveland, Ga.

GEORGIA FARMS in Wilkes Co., finest farming section in South. Lands cheap. Write E. J. Wilkinson, Tigrall, Ga.

MISSOURI

STOCKMEN.—330 acres, clear ever-running water, furnish 5 milk cows, near Bunker, Mo. Price \$3 acre, 1/4 cash, balance to suit purchaser. Must sell. R. W. Mottaz, Missouri Ozark Soil Expert, 705 Olive, St. Louis.

TENNESSEE

ON ACCOUNT OF OTHER BUSINESS I have decided to sell my farm, situated one mile from Centerville, Tenn., on Duck River level to slightly rolling chocolate loam soil, very productive; wire fenced and cross-fenced; 5-room house, well, gasoline engine and tank; barn worth \$2000; new Saginaw silo, 150 tons, just filled with corn and other stock foods; 10 head mules and horses, 2 head stock cattle, 100 head stock hogs, 9 land registered Angus cattle, tools, etc. Will sell all with farm or farm alone. 123 acres, all in cultivation. Price \$100 per acre. If interested, wire me when you will arrive, for this won't last. A. H. Grigsby, Centerville, Tenn.

EXTRAORDINARY OPPORTUNITY.—100-acre farm, which can be rented for \$500 a year cash rent, and on which there will be 15,000 bushels of corn this year, can be bought for \$45,000, with a payment of only \$7500 cash, balance any time within 10 years. Farm will easily pay for itself. Further information furnished interested parties. The Osborne Land Company, Farm Specialists, Bristol, Tennessee.

FOR SALE.—One of the best farms in East Tennessee, 400 acres, with latest improvements and dairy, 20 miles from Knoxville and 1 mile from Clinton, being known as the Eagle Bend Farm. J. O. Leinart, Real Estate, P. O. Bldg., Clinton, Tenn.

TEXAS

FOR SALE.—A farm of 1388 acres, all fenced, 4 wires; 150 acres in cultivation; 10000 acres more can be put in; fronting San Antonio River; river land black mesquite, balance post oak and, suitable for watermelons, corn and cotton; adjoining farm made \$40 per acre in melons; new 5-room house and well; county road and railroad run through lower edge of tract, with switch on land for shipping farm products; 1/4 mile to good school; 5 miles from Floresville, Texas; enough land for several families; a sand company, operating and mining sand in a shallow valley running through land, paying 2 1/2 cts. per ton royalty, which will go to purchaser; timber will pay for land. Price \$22.50 per acre. Rud. Allerkamp, owner, Comfort, Texas.

SPORTSMAN'S and Trucker's Paradise. An island on Gulf coast; land-locked harbor; main channel to Galveston; millions of game and fish; splendid resort; truck grow every day. Cheap. Address owner, H. C. Adler, Victoria, Texas.

53,000 ACRES solid body, South Plains of Texas, six miles railroad, \$15 per acre. Further information write G. M. Adams, Candler, Texas.

VIRGINIA

VIRGINIA ESTATES.—Colonial homes, plantations, farms, suburban homes, Albemarle pippin orchards, timber lands. Write us for what you want. We have it. R. N. Flanagan & Co., Charlottesville, Va.

TO TRADE for city income property—500-acre farm in Virginia, value \$30,000; at station on Southern (main line) Railroad; in high state of cultivation; fine and valuable orchard; good dwelling of 11 rooms; all necessary outbuildings in good condition; schools, churches, stores and mills nearby. Address P. A. Green & Co., 303 Park Bldg., Richmond, Va.

FINE James River farm, 650 acres, 40 miles west of Richmond; fertile upland and river bottom, in high state of cultivation; large dwelling in good condition; splendid view from house; ample outbuildings; part of "Randolph" estate; will sell with or without equipment and stock; Chesapeake & Ohio Railroad by the farm. Price reasonable. Richmond Trust and Savings Company, Real Estate Department, Richmond, Virginia.

FARM FOR SALE, containing 310 acres; situated on the Rappahannock River, Middlesex county, Virginia; water-front on three sides; one of the most beautifully located estates in the tidewater section of the State; adjoins the Water View Wharf property, which is a stopping point for river steamers. Baltimore is the chief market, with a boat daily for that city. Line of boats also runs from Norfolk and Fredericksburg, making stops at that point. The soil is suited for trucking and heavy crops, and is especially adapted for the raising of alfalfa. Nearly all of the land is clear and is high and of a rolling character. Buildings on the property consist of an old-fashioned dwelling and a barn. There are two wells of good water, one of which is an artesian constant flow. The Rappahannock River is five miles wide at this point and contains fine oyster beds and fishing grounds. Price, \$10,000. George B. Robey, Fairfax, Va.

SUMMER BUNGALOW COTTAGES

FOR SALE.—Seven summer bungalow cottages, with from 5 to 50 acres of fine Chesapeake Bay shore land, adjoining Tolchester Beach, Kent Co., Md.; or will sell the whole Tolchester farm (335 acres) if customer desires. This is an excellent business opportunity; could have rented 25 cottages last summer. Walter U. Lusby, Chestertown, Md.

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